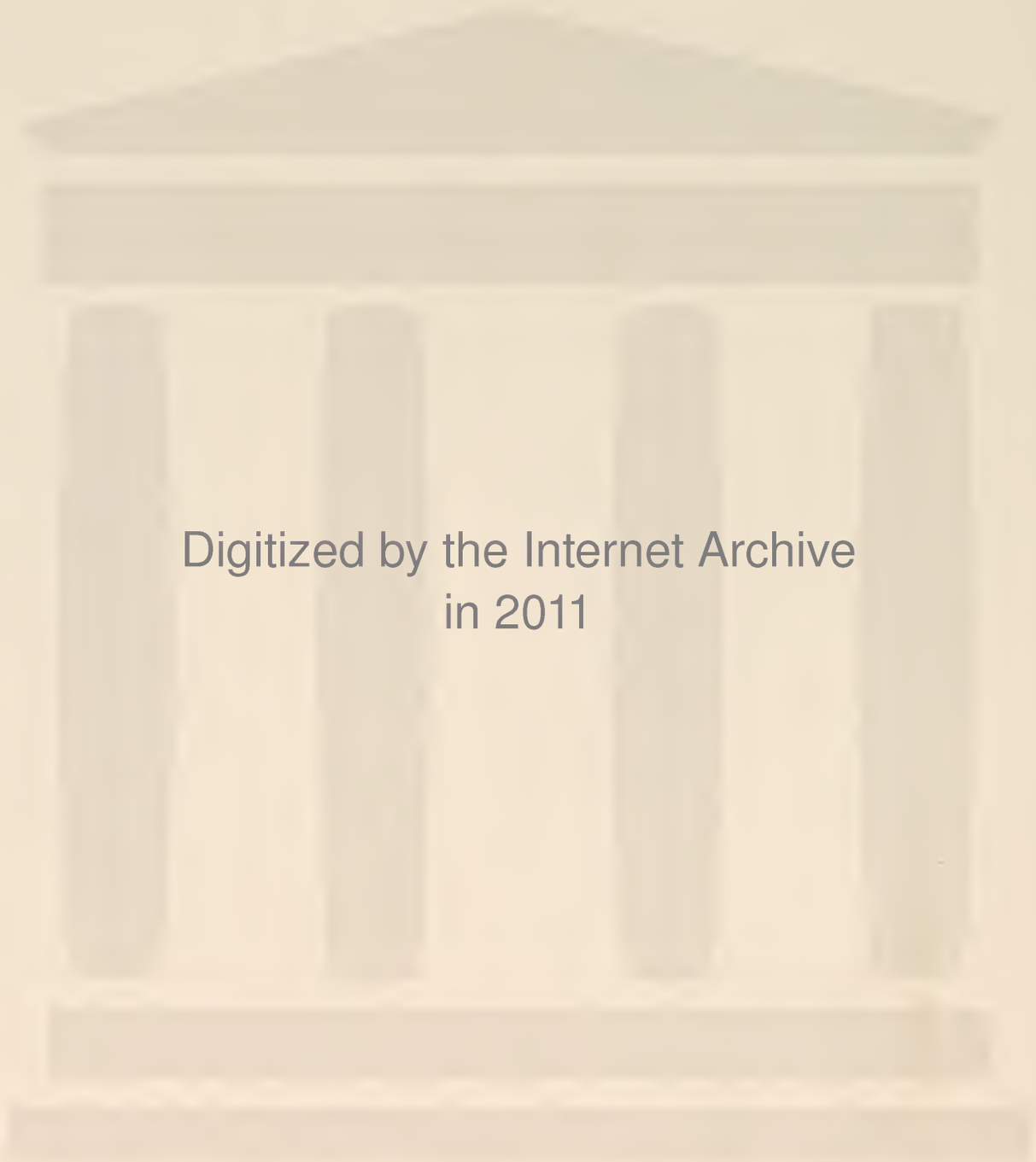
HORIZON

WINTER 1974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HORIZON

WINTER, 1974 · VOLUME XVI, NUMBER 1

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WINTER, 1974 · VOLUME XVI, NUMBER 1

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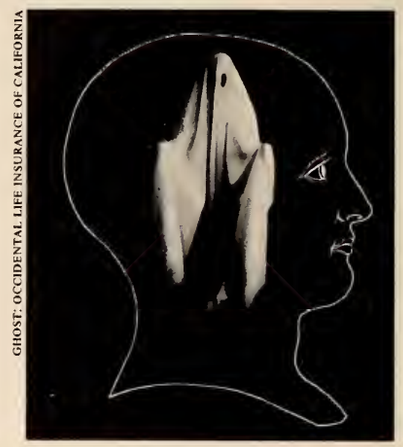
Freeing the Ghost from the Machine



GHOST: OCCIDENTAL LIFE INSURANCE OF CALIFORNIA

"It is a plausible guess," says the Oxford philosopher H. H. Price, "that many of our everyday thoughts and emotions are telepathic or partly telepathic in origin." With that remark it becomes apparent that times have changed. When we last thought about it —if indeed we thought about it at all—mental telepathy stood on the same rung of the ladder as séances, haunted houses, and palm reading. It was downright impossible to believe that thought could travel from mind to mind unaided by physical agencies. Nor did we suppose that mere thought could direct the movement of physical objects, or that people could perceive events they could not observe. It now turns out that we have been wrong. The impossible has become, even to a cautious Oxford don, a plausible hypothesis. The reason for this, in part, is that modern physics no longer rules out, with its former dogmatic finality, what have come to be known as parapsychological phenomena. The physical world as construed by contemporary physicists is no longer simply physical. Gone is the well-behaved atom and gone, too, is the very notion that the only real causes are material causes. Whatever a neutrino is, for example, it is most assuredly not a material body. Whatever a quantum of energy is, when it "leaps" from place to place no physicist thinks it does so because of a physical push. The universe is still governed by law, but what is governed is not only matter. Since immaterial neutrinos are real why should immaterial thought be any less real? The chief intellectual barriers to the study of parapsychological phenomena have all been pulled down; today, as Robert Hughes

shows in an article beginning on page 4, parapsychology has become a fertile new terrain for experiment and research, with results that are sometimes unsettling to those who thought the old clockwork universe was still in fine repair.

The truth is, wherever men inquire these days they seem to come up against deepening mysteries. Compared to telepathy or clairvoyance, human speech seems reassuringly commonplace: vocal chords twang, the air duly ripples, and one hears in plain words what the other fellow is saying. Yet, as Peter Farb indicates in his disquisition on "man the talker," which begins on page 48, nearly everything about human speech is extraordinary and much of it is mysterious. To linguists it is extraordinary that the human species alone is capable of true speech, that every normal member of the species, however inept in everything else, can nonetheless acquire the astonishing ability to use language. It is extraordinary, too, that children, as soon as they begin to speak, do not merely parrot what they hear but create phrases that they have never heard before. What deep-seated potency of the human mind makes it possible for a five-year-old to command the complex grammar of his native language? These are some of the topics that the flourishing science of language is now probing and that Farb discusses in this issue.

Parapsychology and linguistics—both relatively modern scientific fields—share an important common concern. Each science, after its fashion, is dedicated to exploring, as openly and fully as possible, various powers of the human mind that have in the past been ignored, or underestimated, or trivialized. In the scientific world view of a mechanized universe ruled by force, mass, and energy, there was simply no place for mind, which became in Arthur Koestler's phrase, "the ghost in the machine," an aberration better ignored. Thought was defined as soundless speech, speech defined as the product of conditioning, and the mind itself deemed a mere superior computer. The scientific picture of a mechanized universe, however, has been radically revised by scientists themselves. The long reign of matter has drawn to a close and the mind, as a result, has ceased to be a problem to be explained away by pretending it doesn't exist. It has become, once again, the object of deep and genuine wonder. Perhaps this is the harbinger of a reviving humanism, with humankind, its powers and its problems and its uniqueness, once again taking the center of the stage. W.K.

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COVER: Leading his squadron to victory, the Florentine *condottiere* Micheletto da Cotignola cuts a dashing figure in this detail from *The Rout of San Romano* painted around 1460 by Paolo Uccello. Uccello's innovative work, consisting of three panels, is reproduced in a special loose insert enclosed with this issue. An article by Robert Hughes describing the painting of the battle between Florence and Siena begins on page 24.

DON SNYDER

THE COSMOS IS A GIANT THOUGHT

Since 1900 physicists have systematically shattered the mechanistic universe—and made room among the black holes for ESP, psychokinesis, mindons, psitrons, and ghosts

By ROBERT HUGHES

In California, a former nightclub magician from Israel named Uri Geller concentrates on bending a fork he cannot touch. Stanford Research Institute, one of our major think tanks, has developed a program to test Geller's psychic powers. In Moscow, the Soviet Academy of Sciences is deeply committed to the study of what the director of Biotechnology and Human Research for NASA has called "psych-physiological information transfer": translation, parapsychological research. Riding Apollo 14 between earth and moon, an astronaut named Edgar Mitchell shuffles a pack of oddly marked cards and concentrates on flashing mental images of them to four people on the home planet.

The last two hundred years of technological expansion have acclimated us to the way in which shattering consequences can flow from insignificant-looking scientific events. To know what others are thinking is one of the basic dreams (and episodic nightmares) of man, and thought is his last privacy. When one finds the Russian and American governments tacitly involved in ESP research, one may be reasonably sure that the object of interest is strategic and has to do with power. Presumably, researchers in laboratories have other objectives in mind.

In the meantime, the general public remains comparatively apathetic to psi research, despite its steady legitimization within the circles of science and government. This is probably due to time

RESEARCH AND ENLIGHTENMENT: *Professor William A. Tiller, a Stanford University physicist, and Mrs. Lucille Kahn, one of the founders of the Association for Research and Enlightenment, are both members of the parapsychology world. Mrs. Kahn and the Association are dedicated to memorializing the late Edgar Cayce, popular mystic and "psychic diagnostician"; off-campus, Dr. Tiller lectures on "psychoenergetics," including Kirlian photography, a Russian process that may record psychic energy.*

lag. It takes up to thirty years for the findings of the scientific avant-garde to percolate down to the rest of us, whether as useful technology or as part of the "myth" of science. ESP research has taken even longer, because psi phenomena have no readily apparent use and the experiments behind them are grindingly prolix and unspectacular.

The first academically backed experiments in parapsychological research began four decades ago under the leadership of Dr. J. B. Rhine and his wife, Dr. Louisa Rhine. Biologists by profession, they set up their parapsychology laboratory at Duke University in 1930. The field of occult phenomena, once stiffly defensive and musty, began to whirl like a centrifuge, acquiring a methodology and terms to match: ESP, whispering hypotheses, screened touch-matching, precognitive DT, diagonal decline, stimulus object. It took the Rhines some thirty years of hard work, shuffles, deals, dice throwing, and statistical analysis to establish parapsychology as a respectable science. Not until 1969 did the American Association for the Advancement of Science admit the Parapsychology Association to its membership, after two rejections. The ugly duckling of science is at last fledged; yet its habits and purposes are still obscure to most people. As a discipline, parapsychology seems both irrational and factually constipated; yet this pedantic and surprising orphan now claims legitimacy for itself. More astonishing still, it is edging away from its status as a foster child of psychology and moving into the arms of theoretical physics.

Parapsychological research can be divided—though arbitrarily and not at all neatly—into four basic areas. For convenience they are lumped together as psi phenomena. The first area, and the oldest as a research subject, is telepathy, or mind acting on mind. The sender thinks of an apple; the receiver picks up this thought and can then describe the apple.

The second area, involving mind over matter, is clairvoyance, or extrasensory perception of objects and events that exist out there, in the world at large. Invisible to me, there is a red, pyramidal block on a table behind a screen. If I pick up a mental image of that object, I have performed a simple act of clairvoyant perception. But the annals of clairvoyance contain more complex feats. One involved Emanuel Swedenborg who, in Göteborg, Sweden, in 1795, described a fire more than two hundred miles away in Stockholm, giving the name of the man who owned the burned house and the time when the conflagration was put out.

The third also involves mind over matter: PK, psychokinesis. PK seems to flout the traditional laws of physics and common sense more brutally than either telepathy or clairvoyance, for it suggests that mind can alter the motion or even the shape of objects. In practice, this is something every professional crapshooter believes he can do when he's "hot"—indeed, the Rhines were inspired to research PK phenomena by the chance remark of a young gambler, who stated that he could make the dice fall where he wanted them to when he was keyed up.

And finally comes the fourth area of psychic research, probing the most radically puzzling phenomenon of all: the power of prophecy, or precognition, by which the mind demonstrates its ability to foreknow or predict events, to respond to stimuli before they happen and thus play havoc with the known principles of causality.

Now there is a vast amount of testimony to psi phenomena. Freud and Jung took their existence for granted; they fascinated William James; and, as Arthur Koestler points out in his recent study of psi phenomena, *The Roots of Coincidence*, the British Society for Psychical Research has, since its formation in 1882, included on its list of presidents "three Nobel laureates, ten Fellows of the Royal Society, one Prime Minister and a galaxy of professors, mostly physicists and philosophers." That parapsychological inquiry could engage minds of such caliber has surely done something to dispel the lingering idea that psi phenomena are for dotty old ladies who sit in darkened Kensington bed-sitters watching quack mediums pull wads of cheesecloth ectoplasm out of their sleeves. Nevertheless it is not final, or even acceptable, proof of the validity of psi phenomena.

When the Rhines began their experiments on ESP at Duke University, they were up against a wall of variables and imponderables; subsequent researchers have inherited the difficulties. There is no way to test some seer's claim that the San Andreas Fault will split and precipitate Marin County into the Pacific on June 11, 1990. But you can, with patience and rigorous modesty, isolate model functions of psi phenomena and test them to exhaustion against the laws of chance. And that is what the Rhines and their successors did.

The territory was so new that the Rhines' first experiments got the very categories of telepathy and clairvoyance scrambled. Both experimental situations involved the Rhine cards, printed with the now-familiar suits of star, rectangle, circle, cross, and wavy line. In testing for telepathy, the sender looked at a card while the receiver tried to pick up the image of the configuration that was in the sender's mind. In the clairvoyance tests, neither the receiver nor the card dealer saw the symbols on the cards; the cards were simply laid face down on a table. As Rhine ruefully noted eighteen years later in *The Reach of the Mind*:

> The simple truth is, we discovered in 1930 that the "telepathy tests" actually did not test telepathy. . . . There was no way of telling to what extent the subject had drawn upon the sender's thought of the object, and to what extent he had depended upon direct clairvoyant perception of it.

The solution to the telepathy tests was finally found when Rhine directed his senders to merely *think* of a card and

introduced various systems for "randomizing" his choices. But the investigation of ESP has always been troubled by such problems of definition and categorization. Can one ever be sure that one psi effect is not skewed by another? Indeed, one cannot; and it is hard to set up experiments that effectively sift influences when not all the parameters are known. Still, after millions of dice went rattling down corrugated chutes at Duke, the Rhines had overwhelming statistical evidence showing that the human will *can* affect the behavior of dice. They could not help concluding that psychokinesis was a demonstrable force: weak and erratic in its actions, imperfectly predictable, yet defeating chance by odds of thousands to one.

The problem, then, is to narrow the variables. And yet, not even the subjects perform consistently; experiment, the Rhines found, wore out the very powers it was meant to quantify. We murder to dissect. Hence two unpopular facets of psi research: the extreme slowness and modesty of its experimental input, and the stupefying mounds of statistics about dice and cards that come out the other end. Compared to the perverse glamour of quantum physics, parapsychology seems a computerized bore to the general public.

Furthermore, most of us, even if not bored to death by statistics, are apt to look at parapsychology with the prejudices of nineteenth-century mechanistic science. Experimentation in thought transference or precognition is, we assume, a pastime for Victorian parlors, a futile exercise redolent of fraud. But this disjunction is truly ironic, since the idea of the universe as sublimely predictable clockwork is now in tatters. If we dismiss ESP and PK as "contradictory to the laws of physics," we do so at a time of much uncertainty as to what these laws are, or what law is, and at a time when physics and psychic research seem at some points to be converging.

Consider, for example, the following brief passage from an essay by J. Robert Oppenheimer:

> These two groups of thinking, the way of time and history, the way of eternity and timelessness, are both parts of man's efforts to comprehend the world in which he lives. Neither is comprehended in the other nor reducible to it . . . each supplementing the other, neither telling the whole story.

Had this been submitted to the general public twenty-five years ago, the odds are that very few people would have identified it as a scientist's remark. What quaking bogs of Eastern flimflam, what abandonment of destiny, lay beneath that phrase "the way of eternity and timelessness"? There was only one way, and we had it. It was logical, deterministic, linear, and technological: *scientific*, in a word.

The myth of scientific materialism rests in a historical context. In a sense it is the last reverberation of the nineteenth century. One need not expatiate on how its Promethean optimism fed, and was duly fed by, the mystique of capitalism. Even Marxists took it as writ. The advance of science was a paradigm of destiny: knowledge growing exponentially within a limited field. Not all its limits were known, but they existed; in the predictable future knowledge would fill them all, and the cosmic machine, fueled and steered by the immutable laws of physics, would stand wholly exposed to the light of reason. The erratic ghost of "mind" would be chased from the circuitry of that flesh-and-blood computer called the brain just as inexorably as the phantom of God had been expelled from the indifferently rotating galaxies. "From now on," declared a celebrated French chemist named Marcellin Berthelot in 1887, "there is no mystery about the universe."

It seemed that, in J. D. Bernal's words, "the heritage of Newton had been fulfilled." Matter existed in time and in space; the movement of all the heavens was predictable because mechanical: the whole apparatus as orderly as a clock, propelled by the force of gravity, a machine worthy of the divine mechanic. The odd phenomena that did not fit into this picture would be explained in due course by the familiar methods of scientific investigation.

Like a star solidified by its own gravity, science had achieved a unitary and coherent shape. Chemistry had rescued matter from the mumbo jumbo and transmutations of alchemy; from now on there would be a fixed number of elements, each separate from the others. In defining the laws of electromagnetism, the Marquis de Laplace had described the mechanism of particles whose entire past and future could be extrapolated from lawfully bound relationships. Separate disciplines converged and light, magnetism, and electricity were joined in one "grand electromagnetic theory." Linear time combined with mechanistic matter to breed a certain cosmic pessimism: the universal clock had no choice but to run down—but that was not in the realm of human affairs.

But the clockwork was inadequate. Quantum theory and the theory of relativity, as developed by Einstein, Niels Bohr, and their successors, were to render its centralized rigidity obsolete. Since 1900 the finite frame of Newtonian science has split, under pressure from the two extreme ends of the cosmos, the smallest particles and the farthest stars. There, "natural and established law" is constantly flouted. As Koestler puts it:

> The deeper the physicist intruded into the realms of the sub-atomic and super-galactic dimensions, the more intensely he was made aware of their paradoxical and common-sense-defying structure, and the more open-minded he became towards the possibility of the seemingly impossible. His own world, based on relativity and quantum theory, is in fact a world of impossibles.

Neither our logical systems nor our senses are tuned to that world. In it, Hamlet's "to be or not to be" simply dissolves, since it is a habit of quanta both to be *and* not be. The common picture of an atom, with electrons orbiting like buckshot around a hard little mar-

ble of a nucleus, is now essentially unrecognizable in quantum physics. There is barely any ambiguity about the speed and position of real buckshot—its exact path can be mathematically described and tested, its speed is certain. Not so the electron, which *may* be a particle and *may* be a wave but in any case is *not* to be pinned down. Oppenheimer remarked of it:

> If we ask ... whether the position of the electron remains the same, we must say "No"; if we ask whether the electron's position changes with time, we must say "No"; if we ask whether the electron is at rest, we must say "No"; if we ask whether it is in motion, we must say "No."

An electron can pass from the orbit of one nucleus to another's without passing through space between. It occupies no particular position in space when its velocity is under observation; when its location is fixed, its speed is indeterminate. At times an electron behaves like an object: when it hits a TV cathode tube it has weight and produces a pulse of light. But objects can only be in one place at one time. Not the electron. In a famous experiment, one was fired at a metal sheet with two holes; the result—at least in the only words we have to express it—was that it *passed through both of them simultaneously*. In particle physics the notion of linear causality has been pulverized by quantum theory, velocity position uncertainty, and relativity. And other elementary particles make the electron seem conservative; to begin to describe them taxes the capabilities of language.

Perhaps the weirdest elementary particle of all is the neutrino. It is a ghost. It has no magnetic field and no charge and no mass. It interacts with something else under the rarest circumstances—specifically, when a neutrino produced by the breakdown of boron-8 nuclei hits a chlorine atom, the collision may produce an atom of radioactive argon. Otherwise, neutrinos are imperceptible; they pass through the earth as if it weren't there. So the neutrino hardly exists for us; but then, we do not exist for it. The chances against it showing up by direct collision as it glides through the earth at the speed of light are about ten thousand million to one. Like Beau Brummell at the bore's soiree, it is distinguished by its immense absence.

However, much of the energy released from the core of the sun is in the form of neutrinos. Unlike other forms of energy, which take thousands of years to work their way out to the solar surface, the neutrino shoots straight out and keeps going forever. Neutrino emission is therefore an important part of the energy loss that stars, including our sun, suffer while cooling; and that in turn is why one of America's chief instruments for solar study is a 100,000-gallon tank of perchloroethylene, a dry-cleaning fluid, lodged in a blind, rock-walled cave one mile below the town of Lead, South Dakota. Now and then a neutrino goes into the tank en route through the earth, hits a chlorine atom, and unmasks itself.

Here, then, is a "thing" almost devoid of the characteristics of matter, coming to us from a different universe and probably (since it has no mass and is unaffected by gravity) moving through a different time continuum. Could mental energy be analogous to such particles? And if so, could the Russian astronomer V. A. Firsoff be right in proposing that mind is a "universal entity or interaction of the same order as electricity or gravitation," composed of as yet undiscovered particles he calls "mindons"?

The idea of the universe permeated by mind, or as an embodiment of mind, is taken with increasing seriousness by physicists who propose mind-stuff particles with different characteristics, such as the (also undiscovered) "psychon." And it is an elegant, if secular, analogue to the theological vision of a cosmos filled by God's presence. The puzzle in the child's catechism—"If God is everywhere, why do we not see Him?" "We do not see God because He is a pure spirit"—is duplicated among the elusive psychons. Something like neutrino movement might possibly explain why the mysterious power of ESP transactions happens undisturbed by great distance, seemingly impenetrable hills, or thick walls.

The strange time behavior of elementary particles may also be linked to the ESP phenomenon of precognition. Any subatomic particle with no mass may theoretically elude the Einsteinian restrictions on space-time by moving faster than light. One of the early ideas of Richard Feynman, an American physicist who won the Nobel Prize in 1965, dealt with "time reversal." Its starting point was the conduct of positrons, or anti-electrons, particles which are like electrons but with positive electrical charge and negative mass. (Physicists somehow fail to find this concept stupefying.) These short-lived particles can barely exist in our suburb of the cosmos because electrons annihilate them on contact. But what, Feynman asked, if positrons are not antimatter but normal electrons traveling backward in time? The possibilities emanating from this hypothesis almost defeat imagination. For it conjures a universe where *our* concept of time—flowing in one direction from past to future—is provincial; a universe perpetually oscillating between being and possibility, "trying itself out" with different kinds and rates of time in different places. Or, perhaps, in the same place.

If there exist certain particles of matter not fixed in time—as we perceive ourselves to be fixed in it—then the line between precognition and recognition is more difficult to draw. Arthur Koestler is particularly impressed with the work of Adrian Dobbs, the British microphysicist who proposed a particle he called psitron. Like the neutrino, this as yet hypothetical quantum travels in a different time dimension from ours: not in our visible, deterministic realm but in the dimension of *likelihoods*. An antenna attuned to the possibilities, though not the inevitabilities, of future events, it absorbs a "pre-cast" that it

can communicate to neurons in the human brain. As Koestler points out, Dobb's psitrons are no more (or less) preposterous than neutrinos. And one day scientific attempts to provide a basis in physics for psychic phenomena may give rise to chimeras even more startling. For it is no longer realistic to assume that identical time situations permeate the cosmos.

The puzzles of time at the atomic level are echoed at the intergalactic level, in the phenomenon of "black holes." Part of gravitational theory suggests that when a substance becomes dense enough, its gravity turns so violent that the substance is literally crushed out of existence. What holds a star in equilibrium is the balance between gravitational force crushing the star in upon itself and the outward push of heat and radiation from the star's core. But under certain conditions, gravitational forces may prevail. If they do, the star continues to be crushed inward. Ultimately it becomes so dense that not even light waves can escape its gravity and the star snuffs out, becomes invisible: black. The gravitational field remains, a black "hole" with no mass, exempt from the traditional laws of time and space. In theory, it may flit through our universe; or it may vanish altogether, reappearing in another space-time continuum in some universe parallel to ours, still carrying the stellar debris it sucks in like a cosmic lamprey. Yuval Ne'eman, who at forty-eight is Israel's most likely candidate for a Nobel Prize in physics, is not the only scientist to have raised the possibility that quasars—inexplicably fast, energetic objects thought to be racing outward at the far limits of our universe—may actually be matter from black holes in other universes exploding into our own universe.

The possibility then is that if time runs differently in other parts of our universe, "mind stuff" may not be exempt from its vagaries; time may switch direction in the mind just as it may for positrons and black holes. Fitful episodes of precognition may be the result. (What might happen to an astronaut's precognitive faculties if he strayed into one of these amazing black holes is Stanley Kubrick's guess.)

But what of psychokinesis? In 1970 Dr. Helmut Schmidt—Rhine's successor as the head of the Institute of Parapsychology at Duke—published the results of an experiment that suggests, to put it no more forcefully, that psychokinetic energy not only exists but that it can be tested in accordance with certain subatomic principles. Dr. Schmidt used the electrons from a radioactive strontium-90 source to light nine lamps. The order in which they flashed on and off was as random as any sequence can be, for there is absolutely no way of predicting such electron behavior. The subjects were instructed to test their PK power over the hopping quanta by making the lamps light up in either a clockwise or counterclockwise direction. The subjects predicted the unpredictable with a "probability against chance" of one thousand to one. It seems that a profound ambiguity might exist between PK and precognition, as well as a profound connection between these psychic powers and the unpredictable behavior of electrons.

But, as Koestler points out, what holds for quanta need not apply to dice. "You cannot influence the progress of a macroscopic body like a rolling die with microphysical particles." Although Rhine and his associates have accumulated evidence that psychic powers affect the movement and behavior of large, solid objects like dice, it is difficult to explain how and why, even with the most sophisticated theories that quantum mechanics has put at our disposal.

Psychokinesis has, however, slipped into medical study by stealth. Thirty or forty years ago there was intense professional resistance to the idea that the mind could injure or heal the body, but the evidence has since become too mountainous to ignore: from yogic suspension of breathing to the firewalker's unscorched feet, from stigmatization to the "magic" removal of warts and documented cases of bone regrowth in religious spas like Lourdes, facts continue to pile up. To a mechanistic theory of body and brain, such events are inexplicable. But if, as ESP research proposes, the brain is not a machine, if it is instead a highly organized neural transformer of impulses from a different entity called "mind," then a possible link between psychosomatic and psychokinetic events exists. Something like free will, that bogeyman of materialist causation, may cut in and exert its PK influence on the unstable quanta of the brain's neural links. For the psi researcher, "brain" is only a more highly organized and vulnerable part of the world of matter on which "mind" acts.

So-called biofeedback systems have recently been devised for direct mind control over involuntary body processes—muscle tension, blood flow, blood pressure, heart and brain wave frequencies. The Menninger Foundation in Topeka, Kansas, found that subjects could learn to lower their hand temperature ten degrees by "willing" the movement of a temperature meter connected to the skin; others stopped their own migraines by monitoring the blood flow to their faces and so reducing arterial swelling. "It appears," said a report, "that by not concentrating on the headache, other processes of the brain come into play, processes that are unfamiliar and difficult to explain." At the University of Wisconsin, biofeedback subjects achieved spectacular controls over their autonomic nervous systems by learning to adjust their heart and breathing rates—separately. Needless to say, the feedback system has interesting possibilities for ESP research.

The legitimacy of an idea is often a matter of culture. Thus, in the West, we greet the notion of cyclic time with deep unease—partly because it is unfamiliar and partly because the concept of linear time running away and getting lost somewhere permeates our feelings

about death, luck, and economics. But it presents no difficulty whatever to an Indian. So with psi phenomena: ours is one of the very few cultures that does not take some form of ESP for granted. We tend to fear the damage that new propositions may do to a neat system they appear to contradict.

And yet, while relativity and quantum physics destroyed the clockwork universe, they carried on the synthesizing and reductive spirit of nineteenth-century science by producing lower and lower common denominators. The family of one hundred or so elements, once thought to be the fundamental units of matter, turned out to be made of smaller parts, specific arrangements of protons, electrons, neutrons, and their relatives. Heat, light, gravity, electromagnetism, and every organic transaction, from a leaf's photosynthesis to the firing of a nerve end, were shown to involve manifestations of pure energy. The atoms and their attendant particles turned out to be packets of energy as well. $E = mc^2$ tells us what the nature of the universe *is*: energy and matter have the same identity. Thus did an astounding world of interchangeability, both lucid and indeterminate, present itself. No absolutely verifiable events, however improbable to a more segregated physics, could rupture the integrity of this field. It was, and remains, ecumenical rather than exclusive, and quite able to absorb psi research as part of itself. A universe as mind stuff. Why not? Science as mysticism. Why not that, too? The difference of language grows smaller. "Today," Sir James Jeans wrote in 1937, "there is a wide measure of agreement, which on the physical side of science approaches almost to unanimity, that the stream of knowledge is heading towards a non-mechanical reality; the universe begins to look more like a great thought than a great machine."

Robert Hughes, Australian-born, is art critic for Time. *He has written for* HORIZON *on Jasper Johns (Summer, 1972) and, in this issue (see page 24), Paolo Uccello.*

AN ASSORTMENT OF PSYCHICS

If modern physics has shattered our view of the nature of the universe, it has also given rise to vigorous investigation of the new science of parapsychology. The photographic portfolio accompanying this article presents a broad cross section of researchers—from the serious luminaries of the psychic Establishment to seers, sensitives, and assorted *dévots.*

DEAN OF THE ESTABLISHMENT (left): "I'm interested in all the fringes, whether they're so-called lunatic fringes or normal fringes. . . . All my life I have been a devotee, defender of marginal, outlying regions of all sorts, which may extend the boundaries of science." So says distinguished psychologist Gardner Murphy, who, as chairman of New York's City College psychology department, research director of the Menninger Foundation in Topeka, and past president of the American Society for Psychical Research, has for decades orchestrated psi research in America. Murphy predicts, "It may well turn out that parapsychology will be a multidisciplinary thing, owing much to psychiatry, neurology . . . medicine, biochemistry, social sciences."

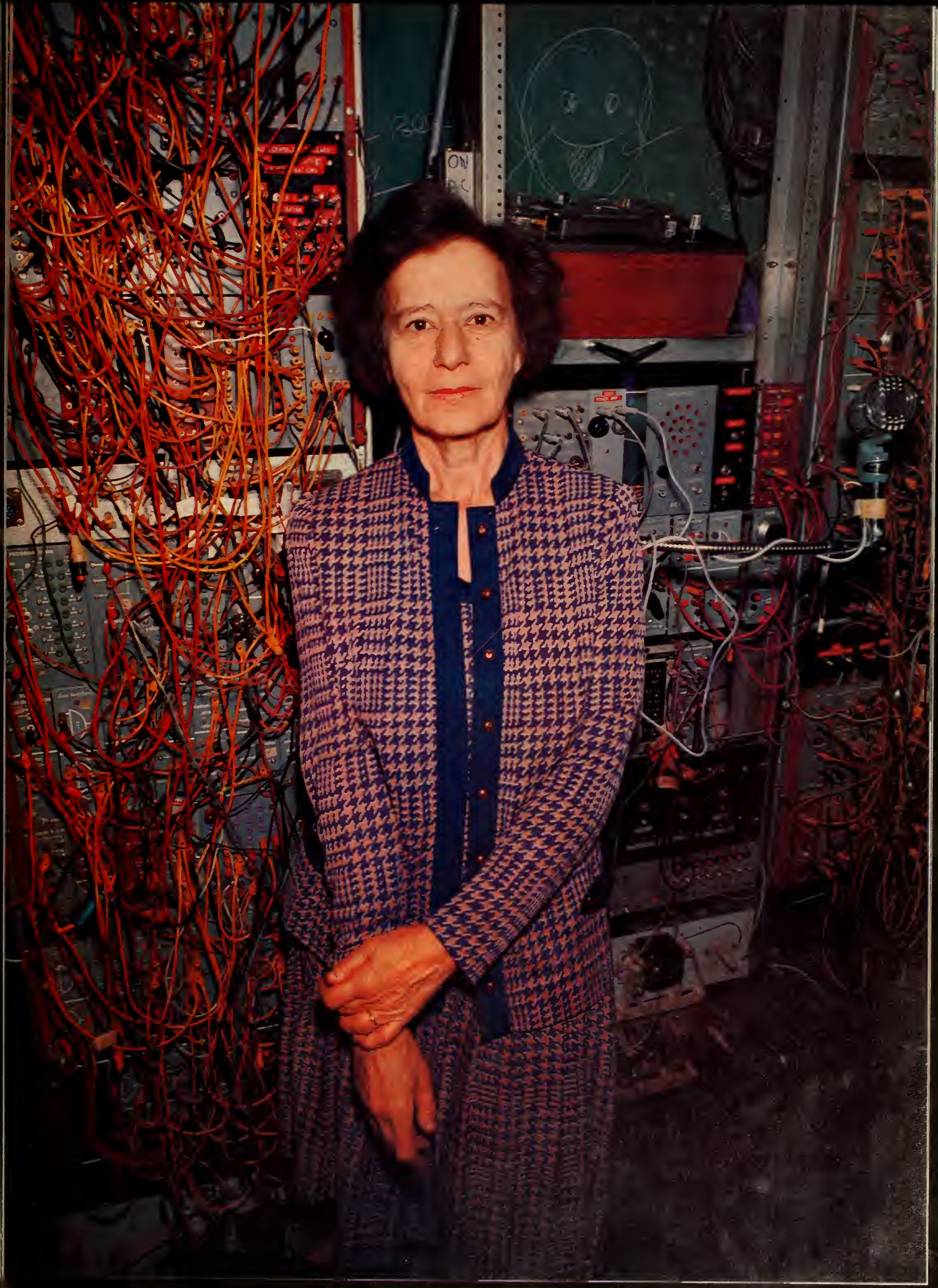
TRUSTEES OF THE ESTABLISHMENT (left): Trustees of the American Society for Psychical Research gather at their New York town house to discuss (among other matters) how to spend the $270,000 recently awarded to them in court. The bequest was earmarked "for research or some other scientific proof of a soul of the human body which leaves at death." Seated, far left, is psychiatrist Ian Stevenson, specialist in the study of reincarnation at the University of Virginia. Standing behind him is society president Dr. Montague Ullman, chief of the Parapsychology and Paraphysics Laboratory at Brooklyn's Maimonides hospital. Others here include a professor of library sciences, doctors, and lawyers.

WITCHES' CRADLE (opposite): Dr. Harry Hermon, masked and flanked by his colleagues Charles Honorton, left, and Dr. Stanley Krippner, prepares to take a spin in the witches' cradle, so called after a trance-inducing device used by witches of yore. These men are part of the research team at Maimonides Medical Center in Brooklyn that explores telepathic dreams and sensory deprivation.

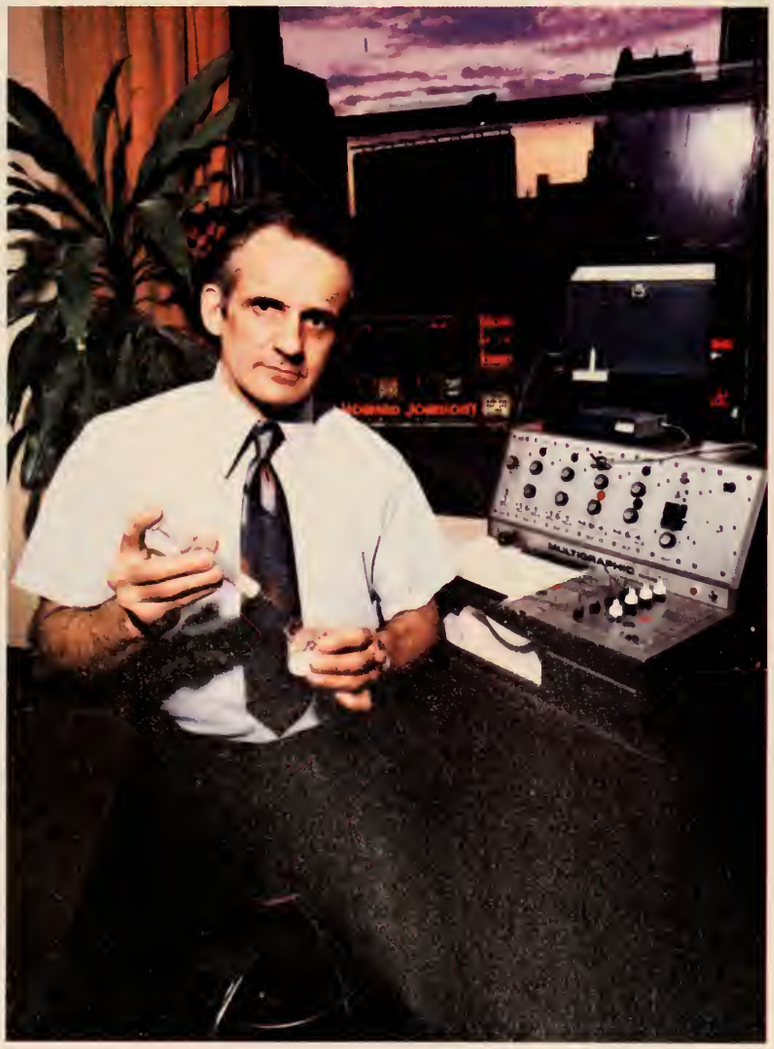
PHOTOGRAPHED FOR HORIZON BY DON SNYDER

CATCHING THE SOUL IN THE ACT: Dr. Karlis Osis, left, director of research at the American Society for Psychical Research, stands beside his "soul trap," designed to detect out-of-body trips. The subject will be seated in a nearby lab and plugged into a machine that measures brain waves; he will then attempt to leave his body, peer through the hole of the trap (indicated by arrows), and return to describe the image projected inside.

THE SHEEP AND THE GOATS: Professor of psychology at New York's City College, Dr. Gertrude Schmeidler, opposite, can claim an early classic experiment in parapsychology: in what is known cozily in the field as the "sheep-goat" test, she proved that subjects who believe in psi phenomena, "sheep," will score substantially better on ESP tests than will disbelievers, "goats." Behind Dr. Schmeidler is a formidable wall of electroencephalograph machines in her laboratory area at City College.



PSYCHONAUTS: Self-styled "gadfly and catalyst" to the psychic movement, ex-astronaut Edgar D. Mitchell poses, left, at Hayden Planetarium with Dr. Jean Houston of the Foundation for Mind Research. Now a civilian with three doctoral degrees, a consulting firm, and his own foundation, Mitchell works full time on "planetary problems"—of our own planet, that is. Dr. Houston wants to found a "psychonaut program for intensive investigation of human mind potentials." With her husband, Robert Masters (see below), and Mitchell, she seeks what she has called a "rational approach to the irrational."



PSYCHING OUT YOGURT: In an office on Times Square, Cleve Backster, left, runs a successful lie detection school for policemen. One day, out of curiosity, Backster hooked his equipment up to a philodendron and threatened to burn one of its leaves. The terrified plant, he says, evinced recognizable "threat-to-well-being" responses on the detection machines. From house plants Backster moved on to sperm cells and yogurt bacteria. Behind the polygraph recorder at left is a container of yogurt that Backster is monitoring. When he injects milk into the batch of yogurt he holds in his hand, the monitored yogurt, according to Backster, will react with greed or envy. He is sure that simple life forms do have emotions, and he predicts that such "primary perception" will have great implications for the future of medicine and healing.

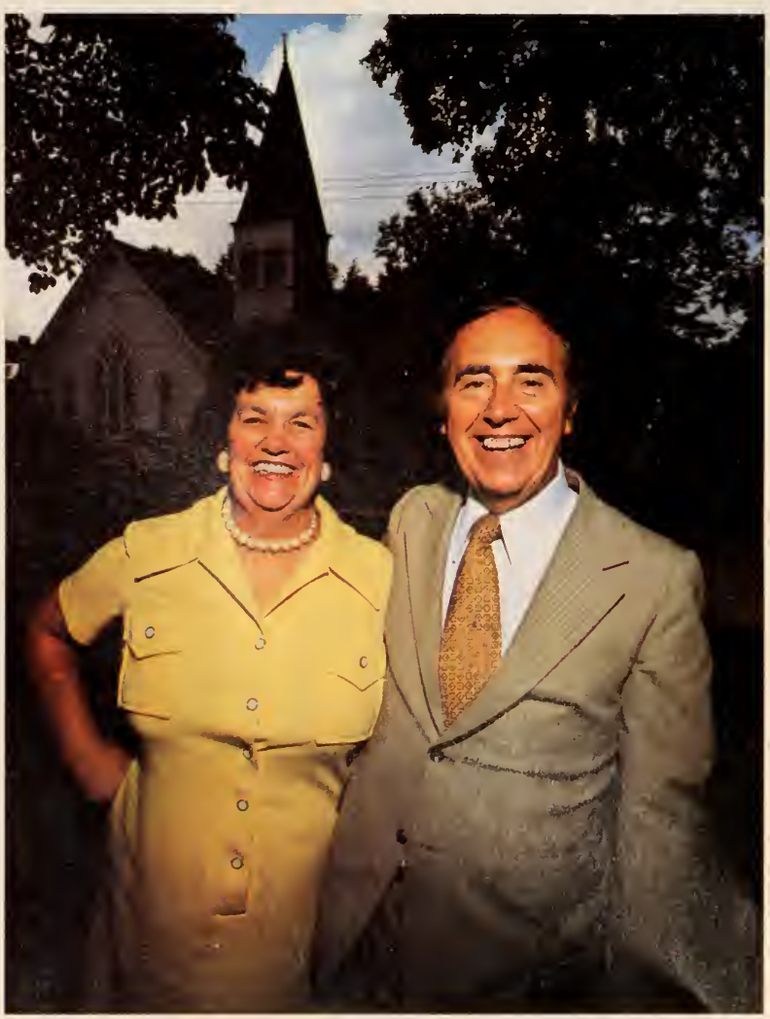
LIBERATING CONVERSE SHEETS: Robert Masters, opposite, experiments in altered states of consciousness and in such areas as arcane religions, pleasure and pain, creativity and trance. Here he works with a young dancer, Converse Sheets, at the Foundation for Mind Research in the suburbs of New York City. Miss Sheets is able to maintain a state of trance for long periods during which she expresses, in dance, such dream experiences as being a "hungry little bird fallen from a nest," or an Egyptian temple dancer. Masters believes that prolonged trances can liberate creative subjects from their inhibitions.

ALL IN THE FAMILY: Life for Judith and Robert Skutch, above, revolves around the paranormal. When Tamara, Mrs. Skutch's fourteen-year-old daughter, exhibited talents in ESP, the family developed sympathetic interest. Tamara's brother, Jonathan (far right), a Yale freshman, works at Kirlian photography. Mrs. Skutch teaches a parapsychology course at New York University and heads the Foundation for Parasensory Investigation, while Mr. Skutch, a stockbroker, has reported the development of an unsuspected gift for psychic healing.

OUT-OF-BODY, OUT-OF-SIGHT: Artist Ingo Swann, right, sits before his painting, *Aft Ship's View of Sagittarius*, showing purportedly first-hand impressions of southern skies observed on an out-of-body trip into space. Swann has worked under rigorous laboratory conditions with Stanford Research Institute physicists, among others, to verify his psychic powers, which range from ESP to affecting an object's temperature or weight.

MIND BENDING: Uri Geller, opposite, claims that the collection of metal objects on the table was mangled by the force that flows through him. Besides performing public feats of key and coin bending, this twenty-seven-year-old Israeli has also demonstrated abilities in telepathy and clairvoyance. Physicists are currently testing Geller to see whether he is a magician, as some assert, or perhaps the century's greatest psychic talent.

ON HIGHER GROUND: The Reverend Canon William V. Rauscher, left, pursues an unusual ministry in parapsychology, extending far beyond his Woodbury, New Jersey, Episcopal parish. As a leader of the Spiritual Frontiers Fellowship, he seeks to expand church involvement with matters mystical and paranormal, exhorting the nine thousand members from many denominations and faiths to develop new spiritual awareness through yoga, biofeedback, and psychical research. Rauscher also counsels the psychically disturbed (psychic experiences are not always welcome and messages sometimes frighten the recipients) and checks out mediums and psychics for fraud, leaning on his college-days training as a magician. Shown in his study, well stocked with literature on psi and the memorabilia of late greats (Houdini's handcuffs and the medium Eileen Garrett's opera glasses among them), Rauscher poses with a deck of cards made famous in early ESP testing.



ALBERTSON, THE FRIENDLY GHOST: In Old Greenwich, Connecticut, a couple of seekers, spiritualists Melvin Smith, left, and his wife, Dorothy, preside over the Albertson Memorial Church, named after one Albertson, a spirit who "came through" (from the other world) to guide its founder, chiropractor Isabel MacDonald. Begun in 1947 with perhaps twenty members, this congregation now counts 250 active and 1,300 inactive members who meet in a former Presbyterian church. About 200 groups such as the Albertson Memorial make up the National Spiritualist Association of Churches, an outgrowth of the nineteenth-century spiritualist movement that grew up around the Fox sisters—the "Rochester Rappers." Spiritualists believe both in prophecy and in man's ability to communicate with the dead. For their members the association provides a register of accredited mediums and healers, summer camps, and correspondence courses of the sort that led Mel Smith, for one example, to ordination in the ministry.

THE CHEMISTRY OF HEALING: Dr. M. Justa Smith, opposite, biochemist at Rosary Hill College and Roswell Park Memorial Institute in Buffalo, is also a Franciscan nun who, by her own description, "kicked the habit." Here, she stands with sisters of Saint Francis, Penance, and Christian Charity before their mother house. Dr. Smith is interested in the physiology of unorthodox healing ("Now who was the first person we know who used the laying-on of hands?") and, with a physician's co-operation, has studied twenty-four patients under treatment by a faith-healer. Twenty-one reported noticeable improvement. But more important, Sister Justa found that the healer could reactivate damaged enzymes held in a vial in his hands. Now moving into cancer research, the sister notes, "I have removed the word 'impossible' from my vocabulary."

WITH EYES WIDE OPEN: Wingate Paine (above, eyes open) stands on his Manhattan terrace with students (eyes closed) of Silva Mind Control®, a nationwide franchise founded in the 1960's by José Silva and now boasting more than 200,000 graduates. For $150 Paine conducts four twelve-hour sessions leading to "functioning in the alpha"—described by Silva as a state of reduced brain wave activity permitting "subjective communication," a term suggestive of ESP. Critics say it is simple self-hypnosis.

FIRST NATIONAL PREMONITIONS BANK: To test your premonitions (if any), send them to Central Premonitions Registry, P.O. Box 482, Times Square, New York. Robert Nelson, left, an executive at the *New York Times*, will take them home to Connecticut and file them away against the day when events confirm them. Of about 3,000 premonitions filed per year, less than 2 per cent pan out.

THE SELF-HELP CIRCUIT: John and Antoinette Lilly, kneeling opposite, pose beamingly with some of the 140 participants at a weekend workshop at Wainright House, Rye, New York. Trained in medicine, biophysics, and neurophysiology, Mr. Lilly, whose specialty used to be dolphin intelligence, views the mind as a "biocomputer" in need of mental and physical recharging. With lectures and writing, Lilly has managed to attain guru status on the psychic self-help circuit from Westchester County to Big Sur.

REFLECTIONS (After Watergate) ON HISTORY

History seems to be made of abstract trends and irresistible forces—until we see it in the making

Historians have not as I write this—gotten around to explaining the Watergate affair after their usual fashion. They have not yet told us, that is, that the scandalous deeds were really due to powerful trends and historical forces lying deep below the surface of events. What all concerned have been eager to learn, what the various official investigators have tried to find out, what truth and justice demand, is something very different from the explanations that historians will surely provide. It is this difference rather than the Watergate scandal itself that deserves some mention before the memories fade.

What we all have been trying to learn, quite simply, is what happened—who were the men involved in certain crimes and their criminal concealment; what did they do and why did they do it; what did Mr. A say to Mr. B and was it an order or only a guarded suggestion; did Mr. C, on hearing from B, act with full knowledge or only through purblind loyalty. And so on. What those concerned with the truth of Watergate have tried to discover is the *story* of the Watergate affair, a historical narrative, framed chronologically, of the interrelated deeds and intentions of many men. When that story is fully told, it will be like—in kind, if not in substance—any other historical narrative: Thucydides's account of the Peloponnesian War, Gibbon's account of Rome's fall, Lincoln's account, in great speeches, of a concerted effort to legalize the extension of slavery. All these are *stories,* narratives of men's deeds and their intentions, and the consequences of those deeds. When the Watergate story is finally told, it will reveal no historical trends, no social processes, none of those "deeper" causes that modern historians invoke to account for what actually happened. These agents of history will simply not be found on the stage where the action took place. Doubtless, everyone will tell the Watergate story somewhat differently, but insofar as each tells a story the narrative will disclose no agents of history other than the actions and purposes of men.

We have come to assume of late that historical narratives of this kind—stories of what happened—are inherently superficial. We expect to hear, eventually, about those underlying causes that have become the mainstay of the modern understanding of history. There is nothing strange about that expectation, for we have been trained—quite rigorously trained—to conceive of history as the outcome of causes more potent than men's deeds. Remember one's school quizzes? Name the five underlying causes of World War I. Discuss the six basic reasons for the decline of the Roman Empire. Scan almost any modern history text and you will find the same general conception of history. It will tell us of the chief factors in the rise of big business. It will speak of "trends" toward centralization, of the economic "processes" that have caused the near-disappearance of the farmer. It will discuss the "growth" of imperialism, nationalism, capitalism, and then lay down the general causes of these general historical results.

All this is quite familiar, and it is worth recalling that the ancients would have found it incomprehensible, for the modern conception of history is not, as

By WALTER KARP

one might suppose, an advance on the view that history is the story of men's deeds. It is utterly incompatible with it.

Since the ancients saw in history no reality apart from men's deeds, they would say to the modern historian, do not tell us about the alleged basic causes of America's emergence as a world power; tell us, instead, what men did that made it emerge. Should the modern historian reply that the story is all very well but the real causes (let us say) are the closing of the frontier, the increasing wealth of the nation, and the growing nationalism of the citizenry, the ancients would still cling to their conception of history. Do you really believe, they would ask, that the closing frontier compelled Dewey to seize the Philippine Islands and that the gross national product in 1899 forced President McKinley to assume a protectorship of China? It may be, the ancients might argue, that the closing frontier created social problems that American leaders chose to solve through a new, outgoing foreign policy. But that still does not make the closing frontier an underlying cause of anything. Had America's leaders chosen a different solution, the story would have been different, though the frontier would still have been closed. The ancient mind, in a word, construed history in the active voice—who did what and why—for it saw nothing in history except active men acting. Nobody has put the ancient's case more succinctly than that most ancient of moderns, G. K. Chesterton. "The question for brave men," he said, "is not whether something is increasing but what we have done to increase it."

The modern mind construes history in the passive voice, for it sees history as the result of general agencies more compelling than the actions of individuals. It barely concedes that men act at all, for to speak of a historical fact—America's emergence as a world power, say—as the general result of general causes is to say that those whose actions produced it could not have acted otherwise, that for all practical purposes they were the pawns of history and circumstance. The modern mind shrinks from the reality of action with an almost audible shudder. American involvement in the Vietnam war, for example, began in deadly earnest when an American president decided to bomb North Vietnam. That is what actually happened, but it runs counter to the modern ideology, and so a number of historians and commentators have now informed us that the war was the result of a "decision-making process," as if only a general trend could initiate anything.

Between the ancient and the modern viewpoints lies an unbridgeable chasm, because the two views have nothing in common. Each, philosophically, is entire unto itself; each refutes and blots out the other. To the question which view do we choose, no abstract answer is possible. It is like asking which is better in the abstract, a hamburger or a rose. There are times, however, when we know beyond any doubt which view we prefer. When something important happens in public affairs, when something arouses in us our dormant love of truth and justice, then everybody understands implicitly that the modern ideology is irrelevant, that the truth is in the story, and that only the old, brave questions are worth asking.

Suppose a Senate Watergate Committee member tried out the modern ideology and sought from one of the witnesses some deeper, historic explanations. Did you feel, he might ask, that historic forces were working upon you when you entered into the conspiracy? Did you feel yourself in the grip of the growing modern trend toward lawlessness? If the witness replied that he had, we would know at once he was lying under oath. No abstract argument could persuade us for one second that when the witness entered the plot he was pushed into it by history. Suppose the entire Senate Watergate Committee adhered to modern ideology and declared that it had no interest in the superficial story of what happened and cared only about the deeper historical forces that produced the Watergate affair. We would conclude, we could scarcely help but conclude, that the senators were also involved in a cover-up.

There is a deeper moral to this, however, that is far from easy to draw. In the Watergate affair, we have not been passive spectators. It is our very desire for truth that set the inquiry in motion and long sustained its momentum. We have not been a mere audience watching political "theatre." We have been members of a national grand jury sifting fact from fiction in a sordid tale of official misdeeds. We have become, willy-nilly, active participants in grave affairs of state. Whenever that occurs, the concept of history as something that happens to men evaporates like fog.

The ancient view of history was discovered by the Greeks through no accidental stroke of genius. It arose with Herodotus after the Greeks created the polis and discovered, in the new freedom of the city, that men were not by nature mere creatures of habit and circumstance. They could come together and freely act together and by their common actions make things happen that otherwise would never have happened. They discovered in the new experience of political freedom that history is the story of men acting. It was not some murky Babylonian scheme of universal and invariant cycles, a conception suited for barbarians who, enchained by immemorial custom and lacking experience of freedom and action, could well believe that history was the result of superhuman forces. The Greek discovery, the ancient view of history, has been almost eclipsed in our time. Yet it is always being rediscovered through the same experience that led to its original discovery—the experience of being citizens, of participating in great affairs, of sharing, through our love of truth and justice, in the making of historic events. At such times we regain something of the ancient public virtue and understanding, and grasp anew the brave, ancient truth that history is the story, endlessly ramified, of the diverse deeds of many men.

The Rout of San Romano

Paolo Uccello's three-part painting is a study of perspective—in painting and military honor

Squadrons of cavalry are trampling through a spring landscape. The sky is a mere rim and the earth presses up to it. The space has the muscular run and rhythm of Tuscan fields and, though flattened somewhat, and airless, it is saturated in color: black, white, gray; russet and improbable pink horsehide; a sharp alternation of red and white lances, blue and gold harnesses. Metal discs on the knights' armor repeat and parody the elliptical form of white and gold roses in a hedgerow. The horses' hoofs crash mutely, as if shod with felt. It was a measured battle that Paolo Uccello painted—the three panels that are known collectively as *The Rout of San Romano*.

LOUVRE—GIRAUDON

A presumed portrait of Uccello

More than a century ago the sections were apportioned among London, Paris, and Florence. England has the beginning of the battle, France the middle, and Italy the end. It (or rather its parts) is possibly the most famous image of warfare to survive in a complete state from the early Italian Renaissance: chivalric, orderly, and brutal.

Uccello's *Rout of San Romano* commemorates what would otherwise be an obscure incident in the long wars between Siena and Florence. In the delicate, unstable balance of diplomatic forces inside fifteenth-century Tuscany, Florence was dangerously isolated: the Sforza tyrants in Milan had exerted a steady expansionist pressure and finally allied themselves with Siena, Florence's old enemy. In April, 1432, the Sienese army thrust into Florentine territory, looting villages, burning crops, and capturing several fortresses. They were led by an able *condottiere* or mercenary warlord, Bernardino della Carda. As the spring, and the fighting, wore on, the Florentines changed commanders. Their general, Micheletto Attendoli da Cotignola, was demoted to second-in-command and his place taken by a man who was destined to be celebrated as one of the most famous military heroes of fifteenth-century Italy, Niccolò Mauricci da Tolentino.

On June 1, 1432, Niccolò da Tolentino was leading a pursuit squadron of about twenty horsemen down the Arno valley, tailing Della Carda. He had left his main force, under Cotignola's command, a few miles back. Near the village of San Romano—some thirty miles west of Florence—Niccolò's men were ambushed by a much larger force of Sienese. The fight went on for eight hours, a bitter and exhausting struggle whose discomfort can only be imagined: the horsemen sweating and stifling under the late spring heat in their wool-lined chain mail and hinged metal greaves, blundering at their opponents with thick lance and iron mace. It was not until evening that Micheletto da Cotignola finally arrived with his relief squadrons. He forded the Arno and attacked the weary Sienese troops. Unable to

In the detail, opposite, from the London panel of The Rout of San Romano, *Florentine cavalry vigorously attacks a Sienese soldier mounted on a white horse. The backdrop is a decorative flowering hedgerow.*

By ROBERT HUGHES

A REPRODUCTION OF UCCELLO'S THREE-PART PAINTING IS INSERTED UNDER THE FRONT COVER OF EACH COPY OF THIS ISSUE.

hold the line, they fled. Such was the rout of San Romano.

It had not been a large or even a politically decisive battle, but it was a striking instance of Florentine *virtù*—that untranslatable concept, so often invoked by Machiavelli, that had to do with individual initiative, astuteness, and prowess. It was the basis for the esteem in which Florence came to hold its new military hero, Niccolò da Tolentino. "The greatest philosopher yields to the greatest captain," proclaimed Leonardo Bruni in a eulogy to Niccolò the next year, 1433. "Plato is not to be compared with Alexander, nor Aristotle with Caesar."

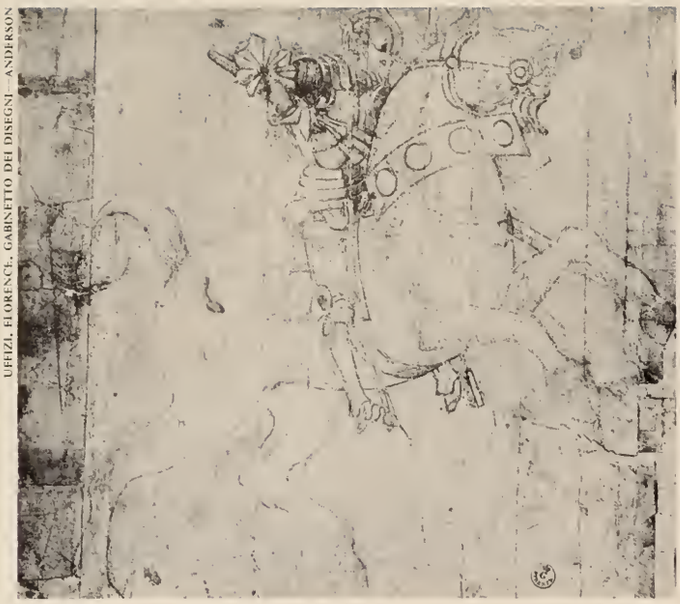
The small size of the fray at San Romano did not minimize its fame. If anything, the one magnified the other, and reflected ideas preserved through the Italian *quattrocento* about the nature and uses of military *virtù*. It was symbolic, and deeply affected by a tradition of formal combat—the honor and pageantry of the medieval lists. It is not true, as some historians have suggested, that the *condottiere* system turned war into a bloodless game of wheeling, trumpeting, and banner flourishing; of course men were killed, and horribly, too. Nevertheless, Renaissance warfare was still a matter to be conducted by paid and qualified rival experts, rather than a disaster involving the whole citizenry.

So Florence had no citizen army in the fifteenth century. Civic leaders took the eminently practical view that *condottieri* like Niccolò da Tolentino cost less. Hence the medieval view of warfare enjoyed a long life beside the Arno. A famous passage on war in Castiglione's manual of self-improvement, *The Courtier*, is much to the point when we look at *The Rout of San Romano*. "When the courtier is at a skirmish, or an assault, or a land battle, or engaged in other such undertakings, he ought to arrange wisely to separate himself from the multitude, and undertake the notable and bold feats that fall to him with as little company as he can, and in the sight of the most noble men in the camp, and especially in the presence and (if possible) before the very eyes of the king or the great man he serves: for it is right that things well done should be shown." The smaller the battle, the more visible the *virtù*.

Not much is known about the early history of Uccello's *Rout*. It was probably commissioned around 1456, at the same time that Andrea da Castagno painted his fresco of Niccolò da Tolentino on horseback for the Cathedral of Florence. *The Rout of San Romano* is first mentioned in an inventory made in 1492 of Lorenzo the Magnificent's possessions in the Palazzo Medici: "3 big paintings of antique tournaments . . . with their gilt frames, mounted high on the wall." The panels were, in fact, part of the decoration of Lorenzo's bedroom; they hung above a set of cupboards, sharing the chamber with other Uccellos, now lost. Presumably, therefore, Lorenzo's father, Cosimo

NATIONAL GALLERY, LONDON

Niccolò da Tolentino, magnificently hatted commander of the Florentine detachment, freezes in full action in this detail from the London panel. Out of the chaos of battle Uccello created a carefully ordered pattern of broken lances, fallen armor, and overlapping horseflesh.



UFFIZI, FLORENCE; GABINETTO DEI DISEGNI—ANDERSON

Uccello's black chalk sketch of a rearing steed, above, may have been a preliminary study for the San Romano painting. A systematic observer, Uccello depicted horses in such a rich variety of postures that his work became a veritable equine encyclopedia for future artists and sculptors to consult. Leonardo da Vinci's sketch, below, made in 1508 for a monument that was never built, owes a great deal to Uccello's equestrians. In general, Uccello rendered horses more forcefully and realistically than he did human figures: compare, for example, the expressive head of the white horse opposite with the deadpan face of Niccolò da Tolentino on the previous page.

BY GRACIOUS PERMISSION OF HER MAJESTY QUEEN ELIZABETH II

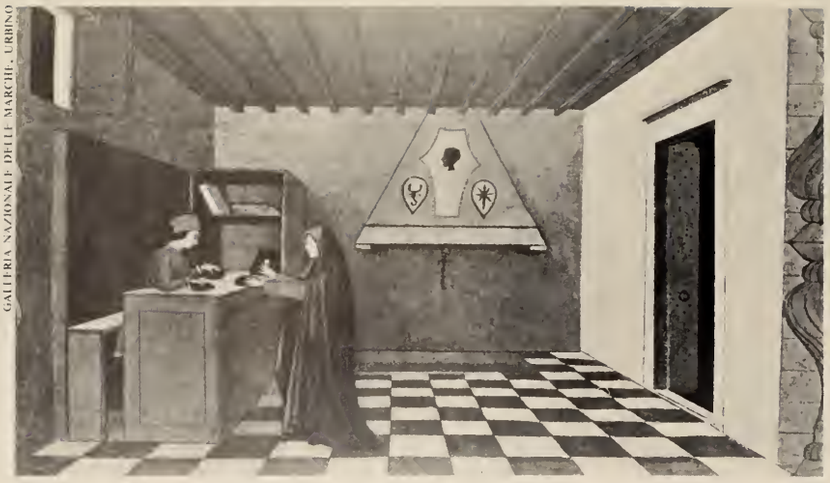
de'Medici, commissioned *The Rout of San Romano* as a private version of the public homage done Niccolò da Tolentino by the equestrian monument in the cathedral, and as a part of his general scheme for the decoration of the Medici Palace.

And so, one must visualize the paintings as a set. They do not read as a straight narrative from left to right, like a comic strip. The story folds inward to the center. The left panel (in the National Gallery in London) shows Niccolò da Tolentino, resplendent in his silver armor and immense, puffy cap of red and gold brocade, thrusting out his baton to signal the first assault on the Sienese. The next stage of the battle is the right-hand panel (now in the Louvre): "Micheletto da Cotignola Leading the Counter-Attack of the Florentine Squadrons." The last stage of the battle is the middle painting, the Uffizi's "Unhorsing of Bernardino della Carda."

We are not dealing with the storytelling conventions of earlier Florentine art, which, in the medieval manner, represented different actions happening serially within the same space, the same landscape. In Uccello's cycle the landscape shifts with time—as in real life: Niccolò, in front of a hedge, gestures from his rearing white horse, but the folding, terraced hills beyond are not the same landscape as that in which Della Carda is vanquished in the center panel, and the advance of Micheletto da Cotignola takes place in a leafy wood. Indeed, the paintings —as originally hung—may have been separated by pilasters and thus never intended by Uccello to mesh exactly. But all the same, they are a set and were conceived as such. Together, as Lorenzo would have seen them on his wall, they disclose innumerable echoes, overlaps, and subtle tricks of composition that tighten them into a formal, as well as a narrative, unit.

The broad design is bracketed by lances, two thickets of poles that enclose the action. One cluster, carried by the Florentines who sweep in from the left, rises behind Niccolò and pushes him forward: the movement culminates in the imperious thrust of his baton arm. The same thing happens in the right-hand panel as Micheletto's squadrons press inward. But their lances, like the spokes of a wheel, descend smoothly to the horizontal as the troops move inward from right to left. A pressure, subtle but heavy, travels from the sides to the center. And there, in the middle panel, the same scheme is repeated: on the left, seven Florentine lances rising from an undergrowth of nodding black plumes and victoriously braying trumpet mouths; on the right, a crisscross pattern of Sienese lances in careful disarray, suggesting recoil and confusion. In the center is the climax, the axis of the painting's formal symmetry: Della Carda, the enemy captain, speared and falling back across the rump of his charger like a scarab on a pin. The thudding encounter of these pressures is resisted by a wonderfully unobtrusive formal device—the head of Della Carda's horse forms

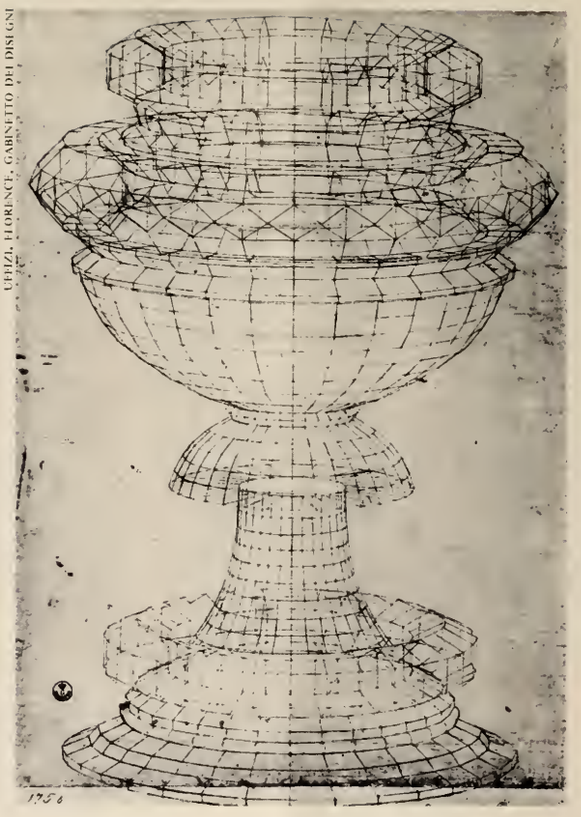
Against an ornamental thicket of weapons in the detail opposite, from the Florence panel, it is the horses, given furious life by Uccello, that appear to be as much the real combatants as their dark, faceless riders.



GALLERIA NAZIONALE DELLE MARCHE, URBINO

Detail from The Profanation of the Host *by Uccello*

Reaching maturity just as artists developed a system of perspective, Uccello experimented widely in the problems of rendering three-dimensional reality, as in his diagrammatic depiction of the interior, above, and in the foreshortening of the fallen soldier, opposite, from the London San Romano *panel. Often he laid aside painting entirely to explore the geometry of complex forms, as in his study of a chalice at right. Uccello was not alone in his pursuits. Mantegna's portrayal of Christ, opposite, shows the same taste for extreme foreshortening while Bellini's drawing, far right, betrays a similar delight in the problems and complexities of linear perspective.*



UFFIZI, FLORENCE, GABINETTO DEI DISEGNI

Perspective study of a chalice by Uccello

the apex of a pyramid pinned at its base by the two fallen horses.

But within the centered, anchored symmetry of the overall composition, there are many echoes. Some, like the fallen horses at the center, are evident at once; others are not. Thus Niccolò's white horse, charging forward from a mass of dark steeds, is repeated in negative fashion in the right-hand panel where Micheletto's black mount likewise springs away from the cluster of light-colored cavalry. But Uccello used so many positive-negative reversals that description bogs down in manifold details. Indeed, *The Rout of San Romano* is one of the most extraordinary and complex feats of organization ever brought to completion by a painter, in or out of the Italian Renaissance. No subject is more inherently confused than a battle scene, but few *quattrocento* paintings on this scale possess so strict a lucidity. What sort of mind could generate such patterns, such mysterious coherences?

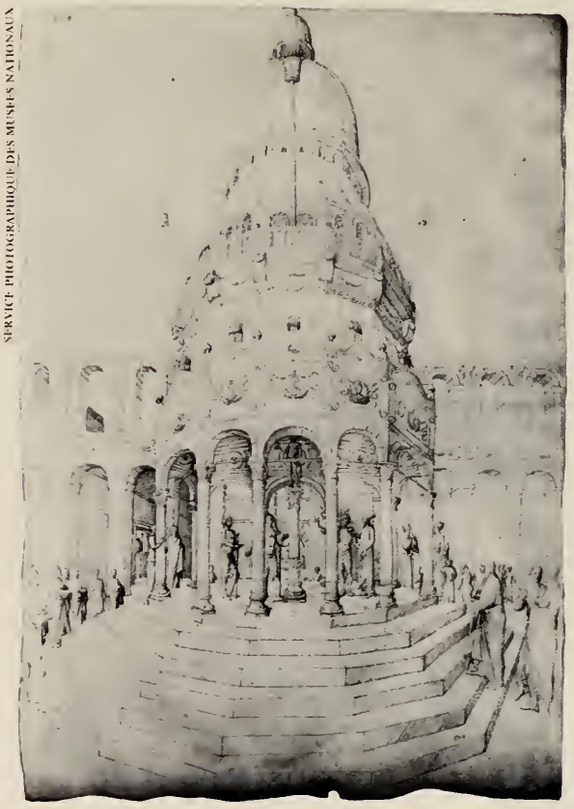
The facts of the artist's life are not abundant. Paolo di Dono was the son of a barber-*cum*-surgeon from Pratovecchio. He was born in 1397, and the name with which he signed his works, PAULI UCCELLI OPUS, is of uncertain origin. Vasari recounts a story that, despite his gossipy unreliability on such matters, may be true: "His house was always full of painted representations of birds, cats, dogs and every sort of strange animal of which he could get drawings, as he was too poor to have the living creatures themselves. His favorite animals were birds [*uccelli*] and from this circumstance he derived his name. . . ."

In any case, Uccello became an apprentice to Ghiberti and appears on the records in 1407 as a *garzone di bottega*, or studio-hand, to that great sculptor; he worked for him until 1414 or 1415. This training was of crucial importance to his career; as John Pope-Hennessy has pointed out, "between 1407 and 1415 the workshop of Ghiberti was the main Florentine stronghold of International Gothic. . . . On many members of the studio Ghiberti's style left no more than a superficial stamp, but with Uccello . . . the lessons inculcated in the workshop bore fruit; and in the early 1430's the shadow of Ghiberti falls across his first surviving works." It is to the International Gothic style, with its brilliant colors and flattened shapes, its preponderance of sinuous contour and its delight in detail from the animal and vegetable worlds, that many of the elements in *The Rout of San Romano* ultimately refer: the richly stylized foliage, the friezelike arrangement of horses and soldiers, the silver-leafed sheen of the armor (now dark with tarnish, though restored to some extent in the Louvre and National Gallery panels), the wreathing, curlicued banners, and the heraldic landscape that rises behind the fight. This love of patterning can only have been reinforced by Uccello's sojourn in Venice, which began in 1425. It lasted five years, and sometime during that period in Venice he was taken on as a master mosaicist for Saint Mark's Basilica.

Now, mosaic is the least spontaneous of mediums. Everything about it, from the preparation of the cartoons to the final setting of the clustered glass chips in their mortar on the wall, is and must be predetermined: form laid into form, side by side, with no margin for improvisation. It is not fanciful to detect traces of that experience in some details of *The Rout of San Romano*: the silhouettes of fetlock, leg, and armor against the flat ground are executed with an inlayer's precision; and, in the London panel, the hoofs of Niccolò's white horse are delineated by a square bathmat of dark green grass to clarify the form

Detail from The Rout of San Romano

The Dead Christ *by Mantegna, circa 1490*



Architectural study by Bellini, circa 1445

against the pale pink earth. We do not know if Uccello designed any *intarsia*—marquetry, a Florentine specialty—after he got back from Venice, but his penchant for inset shapes adds a slight edge to the criticism with which Donatello (according to Vasari) greeted his more involved formal exercises: "Ah, Paolo, this perspective of yours leads you to abandon the certain for the uncertain; such things are only useful for marquetry, in which chips and oddments, both round and square, and other things like that, are necessary."

To mention perspective, however, is to encounter the core of Uccello's art. He did not, in fact, invent this method of depicting a measured, objective, three-dimensional space on a two-dimensional surface. (Vasari implied that he did; but he got Uccello's birth date wrong by almost half a century, declaring that he had been born in 1349.) Strict geometric perspective or *costruzione legittima*, the "lawful construction" by which figures and objects could be made to diminish in size in exact proportion to their apparent distance from the eye, was invented—or rediscovered; the scholarly debate on this point goes on—by the painter, sculptor, and architect Filippo Brunelleschi early in the fifteenth century.

Brunelleschi's "focused" system—that is, one in which the vanishing point is only approximated—was elaborated by Masaccio and Donatello and finally given a firm theoretical base by Leon Battista Alberti. He defined a painting as a "transparent window through which we look out onto a section of the visible world." Thus, a composition should be founded on a triangle, its base at the lower edge of the painting, its apex representing the vanishing point. A perfect triangular composition was, however, the exception; most artists intersected the triangle with a line limiting the field of vision, transforming the triangle into a quadrilateral form, as the hedge of roses does in the London panel of Uccello's *Rout*. In any event, by the time Alberti elaborated this method in his *Della Pittura* in 1435, it had already permeated the artistic practice of Florence. Nobody, least of all Uccello, could be immune to such a revolutionary attack on the flat, Gothic picture plane.

We are so used to hearing about Florentine *certezza*, the realist impulse that perspective liberated in fifteenth-century art, that another aspect of this new mode of representation has been clouded for us: namely, the exquisitely abstract pleasures of its geometric construction. This was Paolo Uccello's particular obsession, and his devotion to it brought down a good deal of posthumous criticism on his head. Vasari, for instance, held that "an immoderate devotion to [perspective] causes an infinite waste of time, fatigues nature, clogs the mind with difficulties, and frequently renders it sterile where it has previously been facile and fertile." The tone is that of a Victorian cleric inveighing against self-abuse. "In cases where an artist devotes more attention to [perspective] than to his figures," he continues, "there arises a dry style full of profiles, generated by the desire of sifting things too thoroughly, in addition to which he frequently becomes solitary, eccentric, melancholy and poor. This," Vasari concludes, "was the fate of Paolo Uccello."

Such are the misunderstandings that flow from a too rigid categorization of "art" and "science." If perspective is only a realist system, instinct and observation are all that would be needed for any master draftsman to do a drawing like Bellini's architectural study (page 31). But for Uccello, perspective geometry had the same aesthetic dimension as Einstein's equa-

tions or Riemannian spatial coordinates possess today for advanced mathematicians. It was a species of Pythagorean ecstasy—the mathematical rule even more beautiful than its uses, the system superior to what could be represented within it.

In this light, Uccello's studies in perspective may be more comprehensible to us than they were to Vasari. The incredibly detailed delineations of a *mazzocchio*, a type of many-faceted wooden or wicker headgear then popular in Florence, that Vasari describes—"with projecting points and bosses, represented in perspective from different points of view, spheres with seventy-two facets like diamonds, and on each facet shavings twisted around sticks, with other oddities"—were drawn from real models. And when he incorporated such forms into *The Rout of San Romano* (see, for example, the checkered hats of the foot soldiers in the Paris panel of *The Rout*), it was not for pedantry. Likewise, the intricacy of his chalice study (page 30) betokens an immense, and successful, intellectual labor, combined with an insatiable curiosity. One begins to see the truth (perhaps more imaginative than literal) of Vasari's story: the aged Uccello up all night on perspective studies; his wife calling him plaintively to bed, and the abstracted answer floating through the studio door, "Oh, what a sweet thing this perspective is!" Like a chess grandmaster, Uccello lived within his game.

Yet in *The Rout of San Romano*, the "lawful construction" is more a property of the objects than of the space. The brown distances in "The Unhorsing of Bernardino della Carda," with their crossbowmen far in the background and too big, belong to the Gothic depiction of space, while the hares and hound coursing rhythmically across the ploughed earth might have come straight from a medieval tapestry. (Is the image of one hound scattering three hares a mischievous allusion to Niccolò's defeat of the numerically superior Sienese?) The only part of the landscape in all three panels to which strict laws of one-point perspective apply is the foreground. On this flat plane the debris of battle, broken lances and armored bodies, lies in a precisely orthogonal grid, following the lines of perspective toward their vanishing point.

But it was for the treatment of horses and soldiers that Uccello mustered all his powers of naturalism. No documented studies for them have come down to us, although there is a drawing of a horse and rider attributed to Uccello (see page 28) that may have been a preliminary study for the painting. *The Rout of San Romano*, however, is drenched and governed by geometry. Each form is conceived as a separate problem in perspective, and, in the Uffizi panel, there are a number of different vanishing points, one for each horse. In some places a form will defy the Albertian rule by displaying two vanishing points: so with the prone corpse in armor (page 31) to the left of the London panel. In this odd metal puppet, Uccello encountered and did not solve a base inconsistency between correct foreshortening and correct "decorum." If the body obeyed the rules of one-point perspective, its feet would be much larger. But you cannot have a pair of big feet sticking out of the picture plane; it looks gross. Mantegna had the same difficulty with his *Dead Christ* (page 31), and tried a similar concealment: the trick being to diminish the feet as well as the head.

Lances, plumed helmets, and horses' heads converge upon the figure of a foot soldier in this densely composed portion of the Paris panel.

The Rout presents a world of ideal solids made horseflesh: massive hemispheres of rump and belly, cylinder of neck, prism of head. The Uffizi panel is darkened, and the other two have suffered from cleaning, so a few of the nuances of Uccello's surface modeling may be lost to us. Perhaps the animals have always looked like ponderous toys that lost their rockers. But one should remember that in the early fifteenth century *The Rout of San Romano* must have seemed a definitive compendium of all the poses in which a horse could be depicted. Rearing, ambling, caracoling, standing, sprawled dead on the ground or snapping at air with a twist of the neck, drawn from above or below, represented in side profile or head-on or from the back, they constituted a pattern book of equine pose, character, and behavior.

Later artists did not hesitate to use Uccello's prototypes, for, next to the human figure itself, the horse was the Renaissance theme *par excellence*. Thus Leonardo drew versions of kicking horses like those in the Uffizi panel; if he was inspired by Uccello's horses, what probably attracted him was the fearsome vitality of their squat legs, lashing out like clubs. And Della Carda's rearing mount is the direct ancestor of Leonardo's project for the bronze equestrian monument to Giacomo Trivulzio (page 28).

But there is also an expressive side to Uccello's horses, and it should not be underestimated. It first appears in 1436, with his fresco of the *condottiere* Sir John Hawkwood mounted on a stallion. The muscles of the horse ripple and bulge with formidable, reserved power beneath its silky terre-verte hide; it advances grimly, and nothing, except a twitch of the *condottiere*'s will, could possibly deflect it. It is a fifteenth-century Sherman tank. This vision of the horse as a demoralizing and inexorable weapon also exists in *The Rout of San Romano*, and there it establishes a threatening tension within, adding to the dramatic impact of the work.

Menace transcends the pageantry. *The Rout of San Romano* is a paradox: a picture full of animals and men that presents itself as a paean to the inorganic. It embodies a fascination with masks and artifacts: the glinting, oily steel of breastplate and cuirass, vambrace and pauldron; the cumbersome, waving lances, like the spines of a sea urchin; the yellow moon curve of deadly crossbows; the studs and roundels, harness bands and trumpets; the iron-shod hoofs. The knights cluster and charge, but their faces are invisible. Plumes sprout from their metal heads like monstrous bell-mouthed orchids. Blundering and colliding within the lucid confines of Uccello's ideal space, the victors and losers of San Romano are united in a dreamlike fatality that only the oranges and tumid hedge roses escape.

SCANDAL, IMPEACHMENT, CONVICTION, 1621

If most officials played dirty, why shouldn't the Lord Chancellor? Because, replied the select committee, no man stands above the law

In the early seventeenth century there was no such thing as public opinion, at least not in our sense. Lacking what might have been the results of a Gallup poll for March of 1621, we can gauge only roughly the degree of public outrage about the scandal that had just broken over the head of the Lord High Chancellor of England.

Certainly there was no indignant outcry in the streets of London. Common men have always known that great men are dishonest—so what else is new? When *haven't* judges taken bribes? people might have asked. The crimes of politicians, like the pranks of small boys, often find an amazing tolerance in their victims. The great man himself—impeached, convicted, imprisoned—had his apologists in his own day as he has had them since. Indeed, he was his own apologist. "And for the briberies and gifts wherewith I am charged," he wrote to the king shortly before the bitter dénouement, "when the book of hearts shall be opened, I hope I shall not be found to have the troubled fountain of a corrupt heart . . . howsoever I may be frail and partake of the abuses of the times."

In March of 1617, when James I appointed Sir Francis Bacon Keeper of the Great Seal of England, he could hardly have foreseen that a scandal involving Bacon would shake the government to its foundations, or that the public man and philosopher who lived so splendidly in York House on the Thames would precipitate a parliamentary struggle so grim that it would end, a generation later, in regicide: James's son beheaded, his grandson a fugitive and an exile.

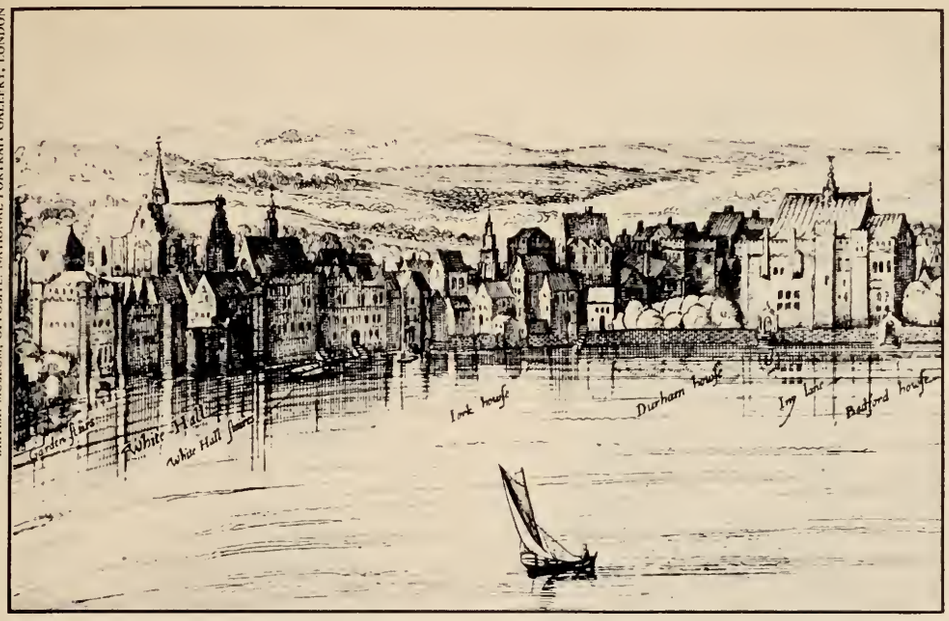
Before the fall: Sir Francis Bacon, next in power to King James himself, about 1620.

Bacon's rise to power had been neither quick nor glorious. He was born in 1561, the youngest son of Sir Nicholas Bacon, who was at the time Lord Chancellor under Elizabeth I. After his father died in 1579, Bacon applied to his uncle, Lord Burghley (the family was impeccably connected), for a post at court, but his uncle sent him back to his law studies. In 1589 he was at last given a minor post, but Elizabeth never thought much of him—not even after he acquired the powerful protection of Lord Essex—and Bacon never got beyond the fringes of the court. He did, however, get far enough that when Essex fell from grace and was tried for treason, he appeared as counsel for the prosecution against his old friend. Then, after Essex was dead, Bacon wrote a defamatory pamphlet about him.

All this made no difference to the queen. Only after her death in 1603 did Bacon's fortunes improve. By 1613 he had risen through a succession of posts to attorney general, and in the process had made a valuable new friend in George Villiers, Duke of Buckingham and the favorite of King James. Buckingham was to be much more useful than Essex: by 1616 Bacon sat in the Privy Council; the next year he was made Keeper of the Great Seal, and the next year appointed Lord High Chancellor and created Baron Verulam.

When, in 1620, Bacon published his *Novum Organum,* a philosophical and scientific treatise, it was hailed by scholars throughout Europe. Probably as a

By HARVEY MARSHALL MATUSOW



BRITISH MUSEUM; OPPOSITE: NATIONAL PORTRAIT GALLERY, LONDON

During his chancellorship Bacon was rowed upstream to work from stairs—not really a water gate—below his residence, York House, in the center of this detail of a 1616 engraving by Visscher.

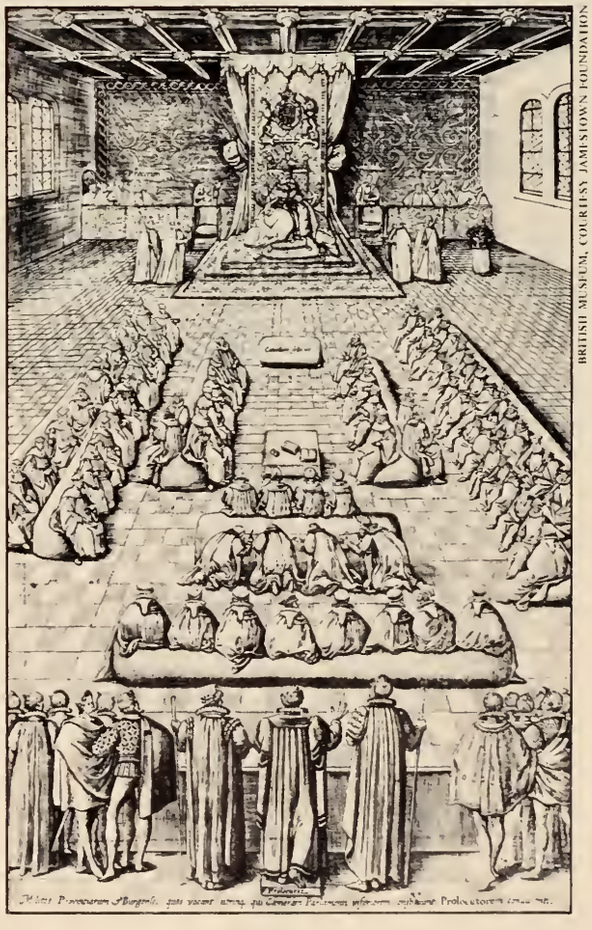
result the king made him Viscount St. Albans; the Prince of Wales witnessed his letters patent. Nothing was lacking now. He was the most powerful official of the land and, beyond the satisfactions of power, money, and titles, he had a reputation doubly burnished by intellectual and public achievement. Viscount St. Albans a criminal, a candidate for the Tower? Impossible.

But Bacon had set the stage for his ruin as surely as for his triumph. The man who courted Elizabeth's favor by condemning an old friend made a most zealous servant for James I and Buckingham. As attorney general he acted for the king in a sordid affair concerning an elderly clergyman named Edmund Peacham. Peacham had been arrested on a charge of libeling his bishop, but he was, in fact, suspected of treason. A search of his study—possibly conducted on Bacon's orders—revealed a copy of a sermon containing treasonous passages. Peacham had never delivered the sermon, nor was there any evidence that he intended to or had even written it in the first place. Still, determined to get a conviction, Bacon put Peacham on the rack and personally interrogated him; when the old man would not confess, the attorney general was driven to tampering with the judges. Peacham was convicted and he died in prison.

Then there was the shameful execution of Sir Walter Raleigh. Raleigh had been tried for treason by James I in 1603 and committed to the Tower under the sentence of death. Raleigh passed the years writing history and dreaming: in 1616, convinced that there was gold around the Orinoco River in South America, he persuaded the king to release him and send him to sea. The expedition was a total disaster, and when Raleigh trustingly returned home, James arrested this poor old relic of Elizabethan glory and sent him to the block. His gallant behavior at the execution roused much public resentment against the king but Bacon, ever the faithful flack, drafted a "declaration" attempting to justify the royal act.

Neither of these cases was directly responsible for Bacon's downfall, but they must have remained in public memory, or at least in the memory of Parliament. What finally brought the Chancellor down was parliamentary wrath over the patents of monopoly mess. Among the powers of Bacon's office was the granting of patents, licenses for commerce that amounted to nothing less than legal monopolies. The Villiers family held three of the choicest: one for the licensing of inns, one for alehouses, and one for the manufacture of gold and silver thread, a commodity much in demand for making lace. Not only were the patent holders lawfully protected from the nuisances of a free market, they were empowered to enforce their monopolies by whatever means necessary—including breaking and entering, or force of arms. Naturally these powers were abused. Parliament had long complained about the system—complaints James responded to by authorizing more patents and so licensing more abuses.

Perhaps not knowing how high public feeling was running against him, James called Parliament into session in January, 1621. He had intended to ask them for money, but the members were



BRITISH MUSEUM, COURTESY JAMESTOWN FOUNDATION

Sir Francis was tried (in absentia) *by his peers in the House of Lords, the scene of this contemporary engraving.*

bent upon airing the grievances of the nation. Primary among the issues was patents. Buckingham quickly perceived that his own family was in danger, for Parliament was soon proceeding against Sir Francis Mitchell and Sir Giles Mompesson, who held the inns patents and were accused of extortion. Buckingham's brother, Sir Edward Villiers, was undeniably involved in the scandal, and so the duke and one of his advisors hastily evolved a plan to send Sir Edward abroad as part of an embassy. The plan was carried out with James's approval, and it was Mitchell and Mompesson who were left to the mercies of Parliament.

Bacon no doubt hoped this would be the end of it, but it was only the start. As a sign of its growing power, Parliament revived an old weapon, one that had lain unused for more than three hundred years—the process of impeachment, by which members of the Commons serving as investigators with the Lords as judges could act against officialdom. It soon became clear that their quarry was the Lord Chancellor, for a committee was not selected to investigate the courts. On March 15, 1621, its chairman, Sir Robert Phelips, disclosed that "great abuses" had been unearthed: "The person against whom these things are alleged is no less than the Lord Chancellor, a man so endued with all parts, both of nature and art, as that I will say no more of him, being not able to say enough."

The charge against Bacon was the ugliest that can be brought against a judge—bribetaking. A man named Aubrey, who had had a case pending in chancery, testified that he had personally delivered one hundred pounds to the Chancellor at York House and had been assured of a favorable settlement. As a matter of fact, Bacon eventually ruled against Aubrey, but he *had* taken the bribe. A similar story was told by one Edward Egerton, who had, he said, presented his Lordship with four hundred pounds. By the time the committee had finished, twenty-eight charges had been brought against Bacon, including one implying that Buckingham had often meddled in the decisions of the Lord Chancellor—this same Lord Chancellor who had once piously admonished the duke never "to interpose yourself, either by word or letter, in any cause depending . . . in any court of justice." In the catch phrase of our own day, let us have law and order until it suits us to break the law.

The king moved to dissociate himself from Bacon, sending a message to the Commons expressing his shock and regret and offering to appoint a special tribunal to deal with the case. Parliament declined the offer and went ahead with impeachment proceedings. Bacon, meanwhile, had taken to his bed and sent word that he would not appear.

On April 22, however, he addressed a letter to the Lords, generally acknowledging his guilt. They replied with a full bill of particulars, and Bacon capitulated a few days later. "Upon advised consideration of the charges," he wrote, "descending into my own conscience, and calling my memory to account so far as I am able, I do plainly and ingenuously confess that I am guilty of corruption, and do renounce all defence." The Lords accepted this confession but prudently sent a delegation to inquire if these were Bacon's own words. Bacon reaffirmed his guilt and pleaded with the committee: "It is my act, my hand, my heart. I beseech your Lordships, be merciful to a broken reed."

On May 2, the Great Seal of the realm was taken from the Keeper, and Bacon was summoned to Parliament for pronouncement of sentence. He fell ill once more, but nevertheless sentence was pronounced: "The Lord Viscount St. Albans to pay a fine of forty thousand pounds. To be imprisoned in the Tower during the King's pleasure. To be for ever incapable of holding any public office, place or employment in the common wealth. Never to sit in Parliament nor come within the verge of the court." The king's pleasure at seeing the Lord Viscount in prison lasted but a few days; he was released and the fine remitted. In 1624 he received a full royal pardon, but his name was forever tarnished and he took no further part in public life.

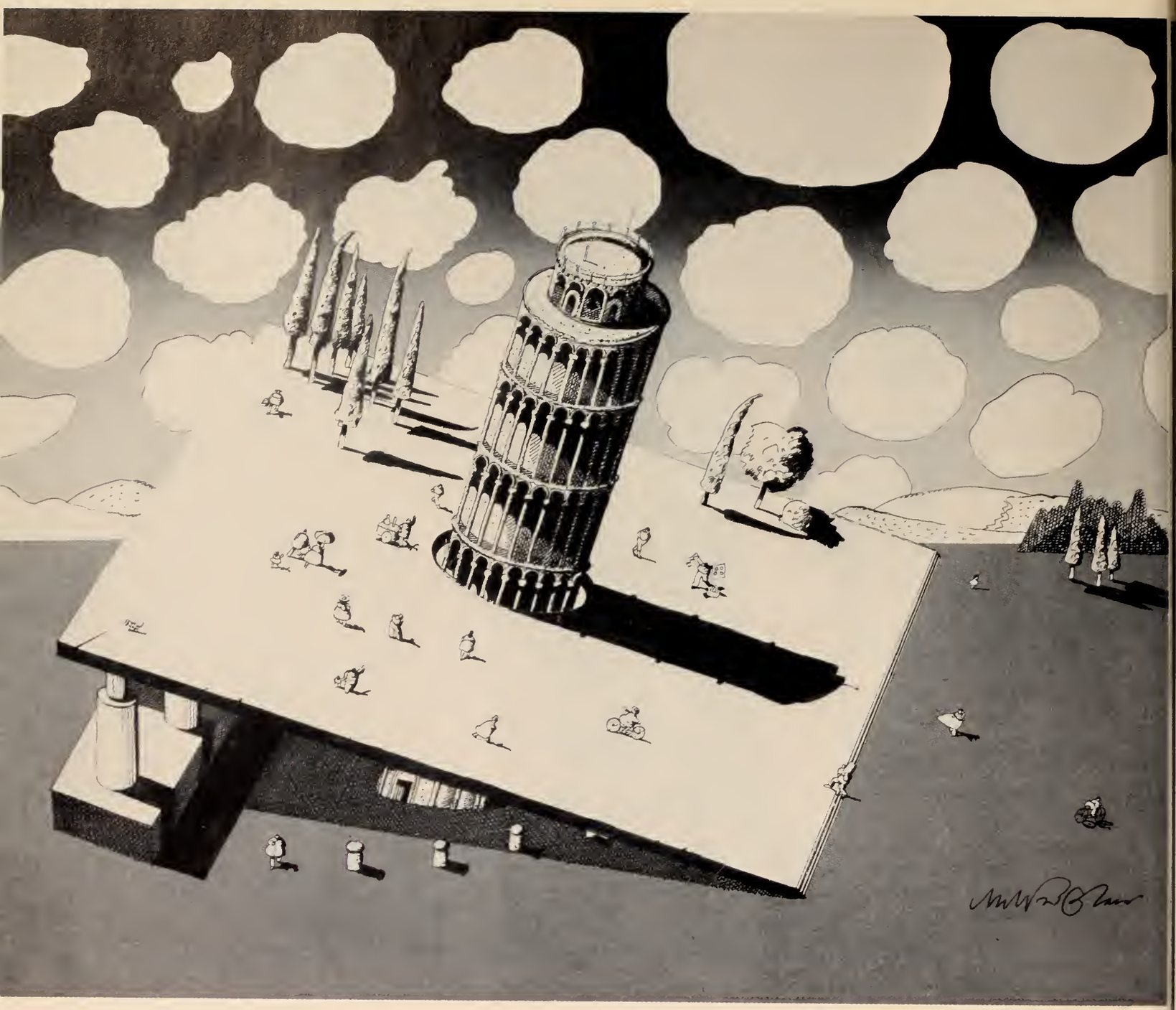
History has wanted to excuse Sir Francis Bacon—and why not? Even though he transgressed the most fundamental ideas of decency, he was still a great philosopher. Yet in his own defense Bacon could think of nothing better than to say, in effect: I only did what the others did—I merely partook of the abuses of the times. Some of Bacon's biographers have also taken this view. It is, after all, an easy out. If everyone is playing dirty, why can't I?

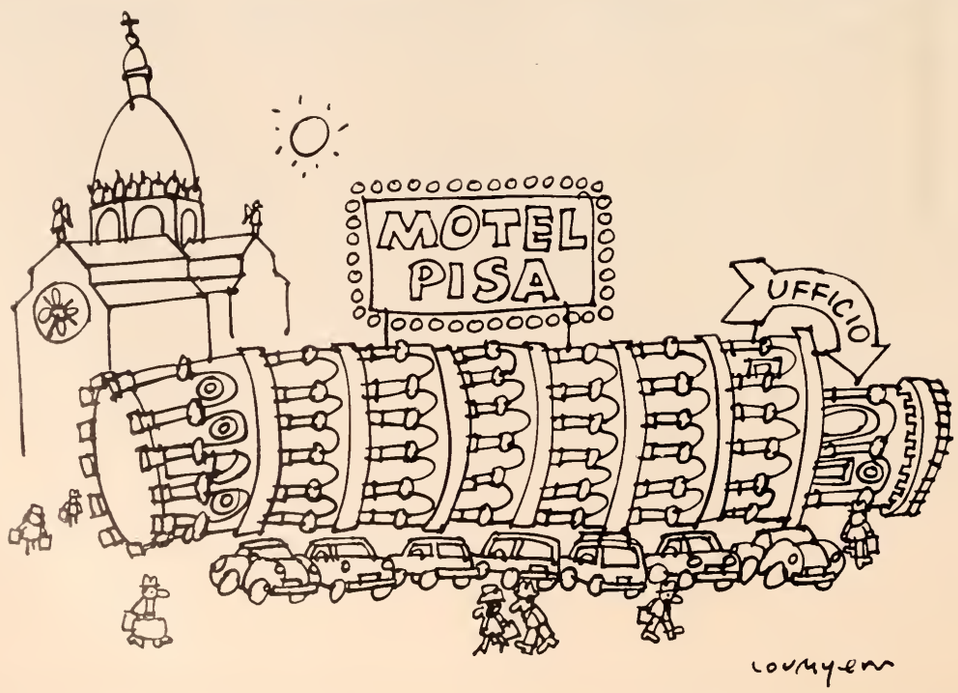
To answer this inquiry comes the ponderous shade of Thomas Babington Macaulay, who, in 1837, published an essay about Bacon and his now forgotten apologist, Basil Montagu. Montagu tried to exonerate Bacon's wrongdoing by arguing that in the seventeenth century all judges took bribes. To which Lord Macaulay replied: "That these practises were common, we admit. But they were common just as all wickedness to which there is a strong temptation always was and always will be common. They were common, just as theft, cheating, perjury, adultery have always been common. They were common, not because people did not know what was right, but because people liked to do what was wrong. They were common, though prohibited by law. They were common, though condemned by public opinion. They were common, because in that age, law and public opinion united had not sufficient force to restrain the greediness of powerful and unprincipled magistrates. They were common, as every crime will be common when the gain to which it leads is great, and the chance of punishment small. But, though common, they were universally allowed to be altogether unjustifiable; they were in the highest degree odious; and, though many were guilty of them, none had the audacity publicly to avow and defend them."

Harvey Marshall Matusow is a free-lance author who is now living in New York City.

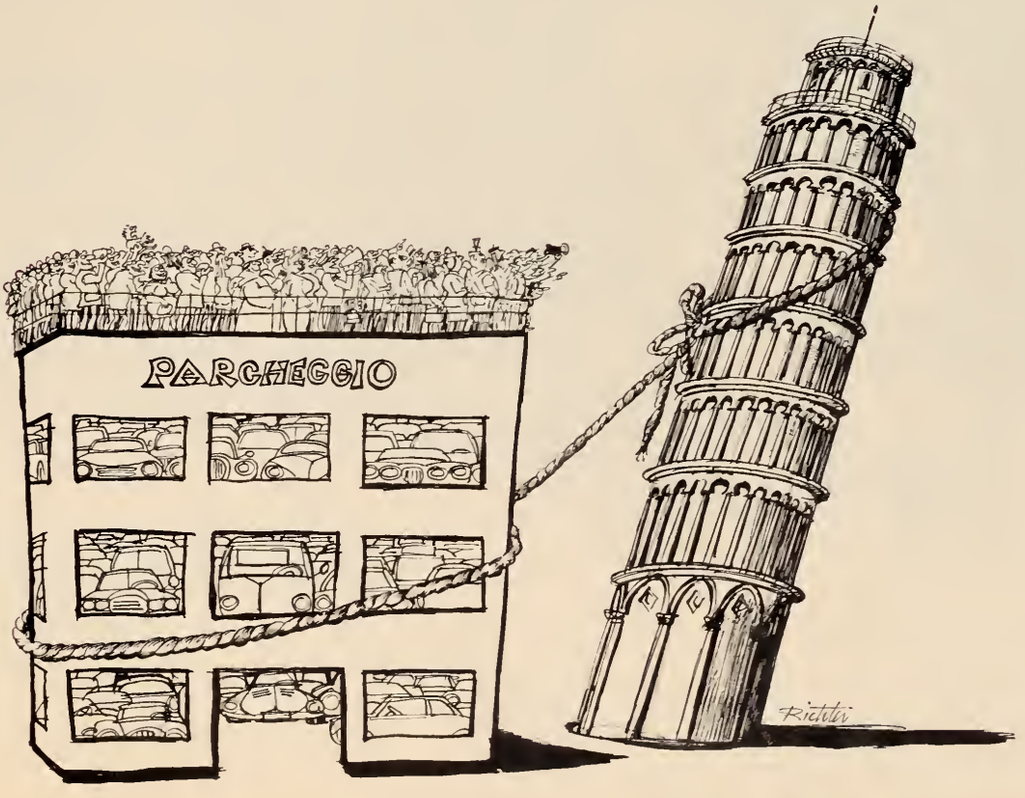
Can This Monument Be Saved?

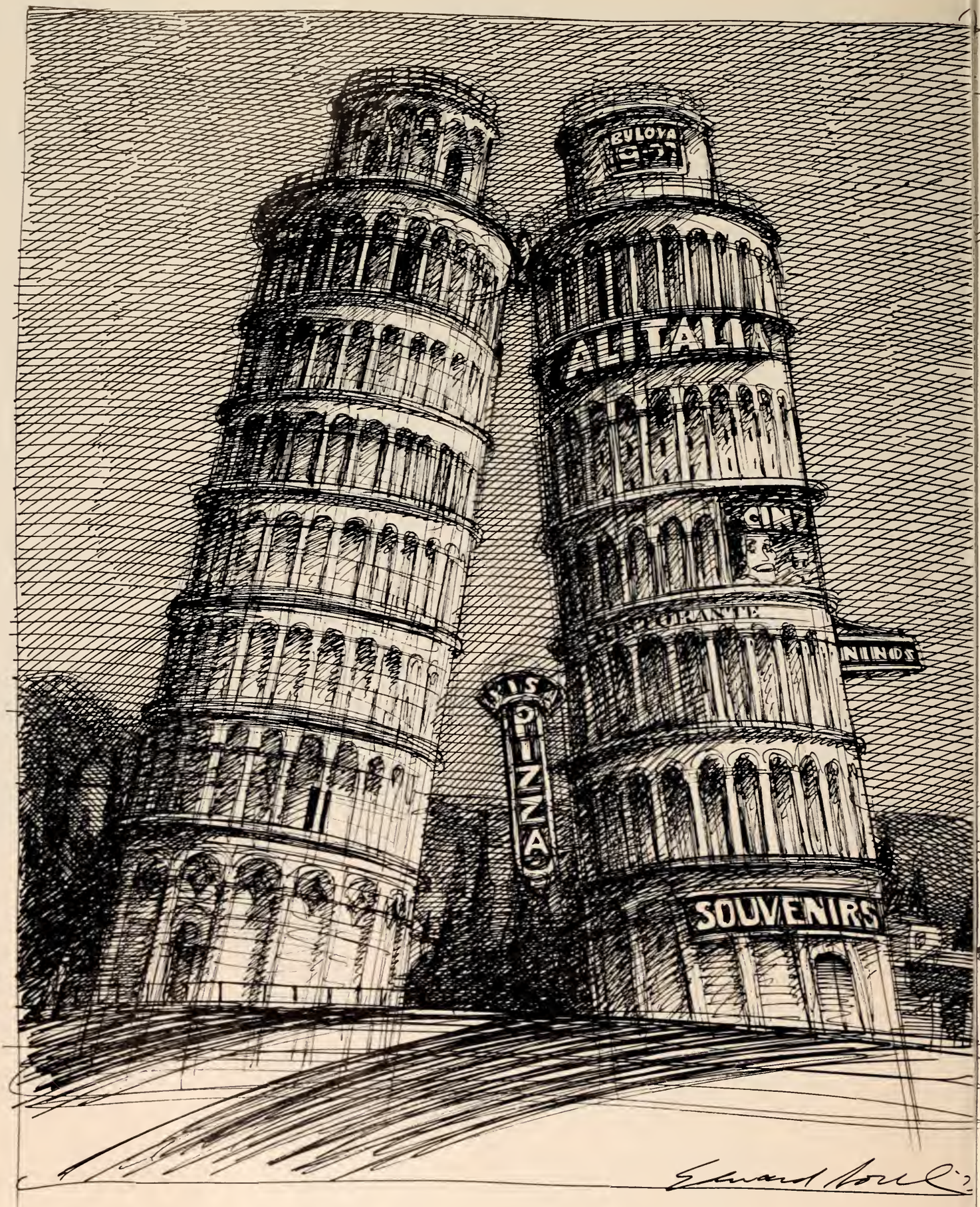
For eight centuries, proud but anxious Pisans have watched their tower tilt ever more daringly with each passing year. The campanile's pronounced eccentricity has drawn generations of tourists who might otherwise have dismissed Pisa as just another college town and hurried on to the bright lights of Florence. But even the natives now declare that *basta* is *basta.* An alarming increase in the tower's inclination has prompted Italy's Ministry of Public Works to offer fifty million lire to the designer who can figure out how to prop up the leaning asset. The competition closed late in autumn: the judges, we suppose, are immersed in blueprints, specification sheets, and calculus tables. In a spirit of international co-operation and with no thought of reward, HORIZON and a number of concerned artists offer herewith thirteen superb—albeit late—entries for the consideration of that august body.




MOTEL
PISA
UFFICIO

SINCE NO TOURIST WANTS TO SEE A COMPLETELY VERTICAL TOWER OF PISA, THE PROBLEM IS KEEPING IT AT A PROPER ANGLE. A FAST FOOD STAND SHOULD BE CONSTRUCTED TO SUPPORT THE TOWER AND PROVIDE SNACKS. (A HAMBURGER SHAPE WOULD BE A GOOD EXAMPLE OF FORM FOLLOWING FUNCTION.) THE BELLS, SILENT FOR 700 YEARS, COULD AGAIN SUMMON PEOPLE FOR SERVICES.




BULOVA
ALITALIA
PIZZA
SOUVENIRS

Dear Pisa:

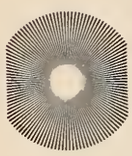
The simplest solution to the problem of the ever increasing tilt in the "Leaning Tower" is an external flying buttress. Most architectural forms, however, would detract from the beauty of the tower itself. I have chosen a form from nature (which is always perfect), the TULIP. What could be more in the spirit of twentieth-century design?

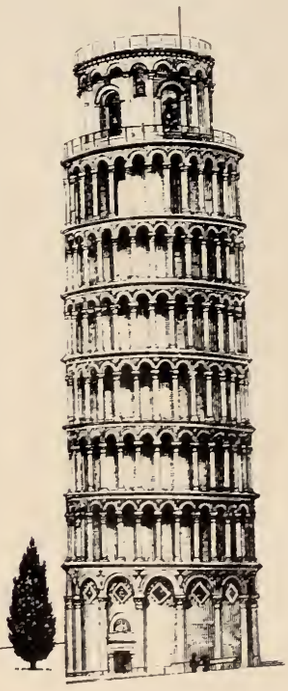
The tulip buttress will be constructed of canvas with gesso and paint and stretched over a frame of structural steel. The tulip itself will be red and white with green stem and leaves, the colors reflecting those of the Italian flag. A revolving restaurant could be housed within the flower, the tubular stem enclosing a round elevator. The base could contain a museum of objects relating to Dutch-Italian history.

Entry to the tower itself could be effected through the original doorway on the ground level, or from either Leaf Level (fourth floor) or Blossom Level (sixth floor), thus relieving congestion at what is now the only entrance.

For festive occasions, the entire tulip buttress might be decked out in antique gold finish. Critics might call this gilding the tulip but we have decided to ignore rigid attitudes in analyzing this entire problem.

Respectfully submitted,
Barry Zaid





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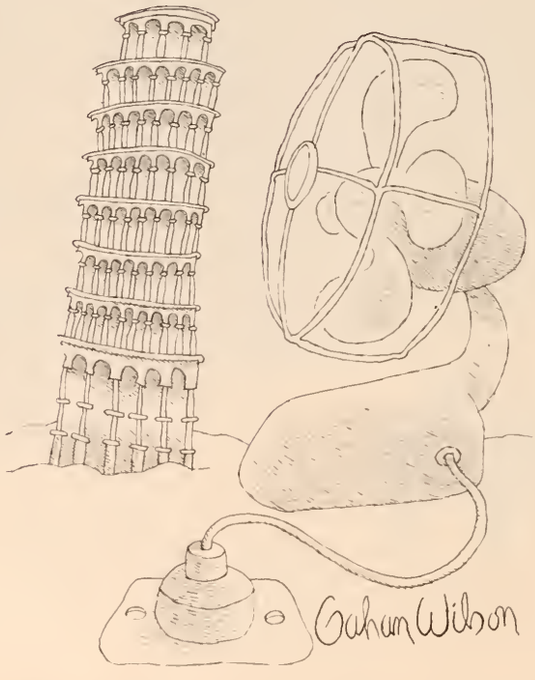
Graham Wilson

K. MUNOWITZ

Adieu Aux Concierges

Like the lamplighter they have had their day

Of all the stock figures on the Paris scene, few arouse more misgivings than the concierge, that gray woman in felt slippers who smells of *vin ordinaire* and stands guard over the typical city apartment building as doorkeeper, caretaker, and resident busybody. (Every tenth Paris concierge is, in fact, a man, but the stereotype today is feminine.)

For the concierge knows far too much about the tenants' business. From her lair off the vestibule she observes all their comings and goings—and those of their visitors. Distributing the mail, she learns more: that Monsieur Fifth-Floor-Left is being dunned for taxes, and that the gentleman who comes to see Madame Third-Floor-Right on Tuesday and Thursday afternoons is in Zurich. And, as the rent collector, often, for the landlord or his agent, she knows just who is in arrears.

What does she do with all this information? Traditionally, she spills it—to other tenants, to regular callers like the postman, and, especially, to concierges in the vicinity. (In French slang, *concierge* means a gossip.) But her indiscretions can be more than simply embarrassing: she is regularly consulted by tax agents and suspicious husbands, and when crimes are committed the police question her first. Nor is she above selling her secrets: before September, 1939, half the city's concierges may have been in Nazi pay (though not all of them realized it), and during the occupation they supplied the Germans with much vital—and trivial—information.

Through the concierge's unspoken threat to expose her tenants, then—and her outspoken hectoring of those who play loud music after 11 P.M. or infringe upon some other rule—she can impose a reign of terror. But if she is a tyrant, she is also a slave: her humble home-*cum*-office, the *loge*, is often one cramped room; she is on duty, theoretically, six days a week from 6 A.M. to 10 P.M., and even after midnight has to awaken—or did until recently—to admit homecoming tenants by tugging on the *cordon*, a rope that releases the door catch. In addition to keeping out intruders and emptying the garbage, she must keep the stairs and halls clean; she also has to clean the courtyard once a week, devoting, in the maniacally precise language of a government decree, "one and a half minutes per square meter for the first forty meters and thirty seconds per square meter for the remaining surface." For this she is paid between forty and one

By ORMONDE DE KAY, JR.

PHOTOGRAPHS BY MICHELLE VIGNES

Square Villaret-de-Joyeuse

Rue de l'Abbé Carton

Rue Bonaparte

Rue de l'Abbaye

Rue Lepic

hundred twenty dollars a month—in a city with the highest living costs in Europe. (She can, however, look forward confidently to receiving generous tips from the tenants at New Year's, knowing that if she doesn't she can make their lives all but unlivable.)

The evolution of *concierge* mirrors the tyrant-slave duality that characterizes the occupation. French dictionaries trace the word to the Latin *conservus*, fellow slave. (In ancient Rome, doorkeepers belonged to the lowliest rank of slaves; they replaced watchdogs and were, like them, chained to their posts.) But by the Middle Ages in France the word had acquired the additional and very different meaning of warden, as reflected in the Conciergerie, the Capet palace on the Île de la Cité, which became a prison and the last earthly residence of, among many others, Marie Antoinette.

The concierge system was instituted by Napoleon, who recruited agents to spy on the domestic life of his marshals. Thereafter, it spread rapidly through the metropolis. Soon, concierges began to turn up in fiction and drama. Balzac created a remarkably sympathetic pair of concierges, the Cibots, in *Cousin Pons*; after him, Eugène Sue, Daudet, and Maupassant depicted various concierges from life. So did Proust: "The implacable concierge, the caricature of a benign fury, fell into the habit, when I asked him whether I might go upstairs, of showing me, by raising his cap in a propitiatory gesture, that he granted my plea."

In Paris, the concierge really came into her own under the Second Empire and Third Republic, when big apartment houses rose in great numbers. From their fortress-*loges*, concierges extended their despotic sway over swelling ranks of subject-tenants. The latter retaliated with barrages of concierge jokes, many based on the premise—not, it seems, wholly fallacious—that concierges are arrant snobs who identify with "their" tenants and come to consider themselves bona fide members of the *noblesse* or the *haute bourgeoisie.*

Under the Fourth Republic the concierges found a champion in a politician named Frédéric-Dupont, who espoused their cause in his bid for the National Assembly. When he was elected, the newspapers rechristened him Dupont des Loges, and when he rose to speak his fellow deputies chanted the post-midnight cry familiar to all concierges, "*Cordon, s'il vous plaît!*" In 1957 his bill to replace the *cordon* with a buzzer became law.

Today the concierges are fast disappearing from the Paris scene. Of 40,000 to 50,000 in the city, most are over fifty and about 5,000 over seventy-five; some 20,000 will die or retire in the next decade. They are being replaced in many new buildings by buzzers, intercoms, and mailboxes; and in older buildings, increasingly, by live-out doormen.

Will the concierge be missed? Not, it is safe to say, by most Parisians. But for the sentimentalists—including thousands of Americans who have spent part of their lives in the City of Light—her departure will surely leave a void. So it is for them in particular that we present this pictorial valedictory to that familiar tyrant-slave, the old-fashioned Paris concierge.

Rue Larrey

Avenue de Villars

Villa Scheffer

PEOPLE ARE TALKING

"Language offers all the reality you can ever hope to know"

Some 2,500 years ago Psamtik, an Egyptian pharaoh, desired to discover man's primordial tongue. He entrusted two infants to an isolated shepherd and ordered that they should never hear a word spoken in any language. When the children were returned to the pharaoh several years later, he thought he heard them utter *bekos,* which means "bread" in Phrygian, a language of Asia Minor. And so he honored Phrygian as man's "natural" tongue. Linguists today know that the story of the pharaoh's experiment must be apocryphal. No child is capable of speech until he has heard other human beings speak—and even two infants reared together cannot develop a language from scratch because it has no existence outside the community of other human beings who speak it. When only one speaker survives, then his language is already dead. Nor does any single "natural" language exist. A child growing up anywhere on earth will speak the tongue he hears in his speech community, regardless of the race, nationality, or language of his parents.

Every native speaker is creative in the use of his language for the strategies of social interaction, for word play and verbal dueling, for exploiting its total resources to create poetry and literature. Even a monosyllabic *yes*—spoken in a particular speech situation, with a certain tone of voice, and accompanied by an appropriate gesture—might constitute an original or emotional use of English. This sort of linguistic creativity is the birthright of every human being, no matter what language he speaks, the kind of community he lives in, or his degree of intelligence. As Edward Sapir said, "when it comes to linguistic form, Plato walks with the Macedonian swineherd, Confucius with the head-hunting savage of Assam."

And at a strictly grammatical level also, native speakers are unbelievably creative in language. Not every human being can play the violin, do calculus, jump high hurdles, or sail a canoe, no matter how excellent his teachers or how arduous his training—but every person constantly creates utterances never before spoken on earth. Incredible as it may seem at first thought, the sentence you just read probably appeared in exactly this form for the first time in the history of the English language—and the same thing might possibly be said about the sentence you are reading now. In fact, if conventional remarks—such as greetings, farewells, stock phrases like *thank you,* proverbs, clichés, and so forth—are disregarded, in theory all of a person's speech consists of sentences that have never before been uttered.

A moment's reflection reveals why that can be so. Every language groups its vocabulary into a number of different classes such as nouns, verbs, adjectives, and so on. If English possessed a mere 1,000 nouns (such as *trees, children, horses*) and only 1,000 verbs (*grow, die, change*), the number of possible two-word sentences therefore would be 1,000 × 1,000, or one million. Of course, most of these sentences would be meaningless—yet at one time people thought *atoms split* was a meaningless utterance. The nouns, however, might also serve as the objects of these same verbs in three-word sentences. So with the same meager repertory of 1,000 nouns and 1,000 verbs capable of taking an object, the number of possible three-word sentences increases to 1,000 × 1,000 × 1,000—or one billion. These calculations, of course, are just for min-

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By PETER FARB

imal sentences and an impoverished vocabulary. Most languages offer many more than a thousand nouns and a thousand verbs, and in addition they have words that function as adverbs, adjectives, articles, prepositions, and so on. Think, too, in terms of four-word, ten-word, even fifty-word sentences—and the number of possible grammatical combinations becomes astronomical. One linguist calculated that it would take 10,000,000,000,000 years (two thousand times the estimated age of the earth) to utter all of the possible English sentences that use exactly twenty words.

For a demonstration of just why the number of sentences that can be constructed in a language is, at least in theory, infinite, show twenty-five speakers of English a cartoon and ask them to describe in a single sentence what they see. Each of the twenty-five speakers will come up with a different sentence, perhaps similar to these:

I see a little boy entering a magic and practical-joke shop to buy something and not noticing that the owner, a practical joker himself, has laid a booby trap for him.

The cartoon shows an innocent little kid, who I guess is entering a magic shop because he wants to buy something, about to be captured in a trap by the owner of the shop, who has a diabolical expression on his face.

It has been calculated that the vocabulary and the grammatical structures used in only twenty-five such sentences about this cartoon might provide the raw materials for nearly twenty *billion* grammatical sentences, a number so great that about forty human life spans would be needed to speak them, even at high speed. Obviously, no one can ever speak, read, or hear in his lifetime more than the tiniest fraction of the possible sentences in his language.

This view of creativity in the grammatical aspects of language is a very recent one. It is part of the revolution in ideas about the structure of language that has taken place since 1957 when Noam Chomsky of the Massachusetts Institute of Technology published his *Syntactic Structures.* Since that time Chomsky and others have put forth a theory of language that bears little resemblance to the grammar most people learned in "grammar" school. Not all linguists accept Chomsky's theories. But his position represents an influential school in theoretical linguistics today, one that other schools measure themselves against.

Chomsky believes that all human beings possess at birth an innate capacity to acquire language. Such a capacity is biologically determined—that is, it belongs to what is usually termed "human nature"—and it is passed from parents to children as part of the offspring's biological inheritance. The innate capacity endows speakers with the general shape of human language but it is not detailed enough to dictate the precise tongue each child will speak—which accounts for why different languages are spoken in the world. Chomsky states that no one learns a language by learning all of its possible sentences, since obviously that would require many lifetimes. For example, it is most unlikely that any of the speakers who saw the cartoon of the child entering the magic store ever encountered such a bizarre situation before—yet none of the speakers had any difficulty in constructing novel sentences about it. Nor would a linguist who wrote down these twenty-five sentences ever have heard them previously—yet he had no difficulty understanding them. So, instead of learning billions of sentences, a person unconsciously acquires a grammar that can generate an infinite number of new sentences.

Such a grammar is innately within the competence of any native speaker of a language. However, no speaker—not even Shakespeare, Dante, Plato, or the David of *The Psalms*—lives up to his theoretical competence. His actual performance in speaking a language is considerably different and it consists of numerous errors, hesitations, repetitions, and so forth. Despite these very uneven performances that a child hears all around him, in only a few years he puts together for himself the theoretical rules for the language spoken in his community. How? Chomsky's answer is that we are born with the capacity to learn only grammars that accord with the innate human blueprint. We disregard performance errors because such errors result in sentences that could not be described by such a grammar. Strong evidence exists that native speakers of a language know intuitively whether a sentence is grammatical or not. They usually cannot specify exactly what is wrong, and very possibly they make the same mistakes in their own speech, but they know when a sentence is incorrect.

The human speaker—born with a capacity for language, infinitely creative in its use, capable of constructing novel utterances in unfamiliar speech situations—shares the globe with a variety of animals that whistle, shriek, squeak, bleat, hoot, coo, call, and howl. And so it has been assumed, ever since Aristotle first speculated about the matter, that human speech is only some superior kind of animal language. Alexander Graham Bell saw nothing odd about his attempts to teach a dog to speak by training it to growl at a steady rate while he manipulated its throat and jaws. The dog finally managed to produce a sequence of syllables which sounded somewhat like *ow ah oo gwah mah*—the closest it could come to "How are you, grandma?" Other experimenters concluded that animals could not be taught human languages—but they saw no reason why they themselves should not learn to speak the way animals do. A few enthusiasts have even published dictionaries for various bird and animal languages. Such efforts are ludicrous because human speech is quite different from most animal communication. Between the bird's call to its mate and the human utterance *I love you* lie a few hundred million years of evolution, at least one whole day of biblical Creation. Saint Francis of Assisi, addressing the birds, may have had much to say to them, but they had nothing to discuss with him.

Human speech seemingly resembles animal calls in that it employs a small

number of sounds, often no more than the number of sounds emitted by many species of birds and mammals. But unlike animal calls, human sounds are combined to form a vast vocabulary, which in turn is structured into an infinite number of utterances. The number of different units of sound in each human language—such as the *m* in *man* or the *ou* in *house*—varies between about a dozen and a little more than five dozen. English recognizes about 45 units, Italian 27, Hawaiian 13. This range is not notably different from the separate units of sound emitted by many kinds of animals: prairie dog, 10; various species of monkeys, about 20; domestic chicken, 25; chimpanzee, 25; bottle-nosed dolphin, 28; fox, 36.

Chimpanzees, with their 25 units of sound, are incapable of speech, while Hawaiians, with only 13 units, possess a very expressive language. That is because the chimpanzee employs one unit of sound in social play, another when a juvenile is lost, a third when it is attacked, and so on—but two or more calls cannot be combined to generate additional messages. In contrast, the 13 sounds of Hawaiian can be combined to form 2,197 potential three-sound words, nearly five million six-sound words—and an astronomical number if the full repertory of 13 sounds is used to form longer words. In the same way, a speaker of English can select three units of sound out of his store of 45—such as the sounds represented in writing as *e, n,* and *d*—and then combine them into such meaningful words as *end, den,* and *Ned.* But the chimpanzee cannot combine the three units of sound that mean "play," "lost juvenile," and "threat of attack" to form some other message. Nor can the chimpanzee's call that means "Here is food" ever be changed to talk about the delicacies it consumed yesterday or its expectations about finding certain fruits tomorrow. Generation after generation will use that call solely to indicate the immediate presence of "food."

Certain animals—most notably parrots, mynas, and other mimicking birds—can emit a wide repertory of sounds, and they also have an uncanny ability to combine them into longer utterances. Nevertheless, they do not exploit their abilities the way human beings do. A trained myna bird can so unerringly repeat an English sentence that it is scarcely distinguishable on a tape recording from the same sentence spoken by a human being. Parrots also can duplicate human speech with awesome fidelity and they have been taught vocabularies of more than a hundred words. A parrot can easily enough be trained to mimic the utterance *a pail of water* and also to mimic a variety of nouns such as *sand* and *milk.* But, for all its skill, the parrot will never substitute nouns for each other and on its own say *a pail of sand* or *a pail of milk.*

Jack and Jill and Bertrand

Even vocal animals are monotonous in what they say in a given situation. The well-known nursery rhyme does not reveal what Jack said to Jill when they went up the hill to fetch a pail of water, and in fact no way exists to predict which of the tremendous number of strategies two people will select in such a speech situation. But everyone knows what a male songbird will say when another male enters its territory during the breeding season. It will emit a distinctive series of sounds that signify "Go away!" It cannot negotiate with the intruder, nor can it say, "I'm sorry that I must ask you to depart now, but I will be happy to make your acquaintance after the breeding season is concluded." The male defender of the territory is simply responding to the stimulus of an intruder at a certain time of the year by uttering a statement about the existence of such a stimulus.

Specialists in animal behavior infer the "meaning" of animal sounds from the behavior of the animals at the time they emit the sounds—but it is safe to conclude that the sounds express only indefinable emotions. Individuals belonging to the same animal species emit approximately the same sounds to convey the same emotions. All expressions of pain uttered by any individuals of a monkey species are very much the same, but in the human species the sounds that a speaker uses to communicate his pain are quite arbitrary. A speaker of English says *ouch,* but a Spaniard says *ay* and a Nootka Indian *ishkatakh.* Jill might have emitted an animal-like cry of pain as she came tumbling down the hill—but, as a speaker of English, she also had the choice of saying *I hurt my head* or *Please take me to a doctor.* Even if Jill merely uttered the conventional word, *ouch,* which signifies pain in English, this sound is nevertheless considerably different from an animal's cry of pain. An animal's cry cannot be removed from its immediate context, but Jill's *ouch* can. She could, for example, tell someone the next day about her accident by saying "When I fell down the hill, I cried *ouch.*" Or she could utter *ouch* in a completely different context, as when someone makes a feeble pun and she wishes to convey that her sensibilities, not her bones, have been wounded.

An animal, though, has no such choices. As Bertrand Russell remarked about a dog's ability to communicate, "No matter how eloquently a dog may bark, he cannot tell you that his parents were poor but honest." Despite the variety of sounds in the babel of the animal world, nonhuman calls are emotional responses to a very limited number of immediate stimuli. Every other kind of sound made by living things on the planet belongs to human speech alone.

The search for the genesis of speech in the lower animals has not uncovered a single species that can communicate with all of the same features found in human speech. The most promising candidates in whom to search for the roots of human language would appear to be man's closest relatives, the apes and monkeys. Many species possess extensive repertories of calls concerned with emotional states, with interper-

sonal relationships inside the troop or with animals outside of it. The chimpanzee, in particular, has important attributes for learning: intelligence, sociability, and a strong attachment to human beings. The potential for language in chimpanzees seems so great that several attempts have been made to teach them to speak. All such experiments failed, even when the chimpanzees were reared in households on an equal basis with human children. The most successful of these attempts, which involved six years of painstaking attention by a psychologist and his family, resulted in a chimpanzee's learning to speak merely approximations of four English words.

Chimp Talk

It is now known chimpanzees cannot learn a spoken language because their vocal apparatus is different from that of human beings. But about 1966 two psychologists at the University of Nevada, Allen and Beatrice Gardner, had the novel idea that chimpanzees might possess a capacity for language even though they lack an apparatus to speak it, a situation similar to that of deaf-mute children. They decided to attempt to separate the chimpanzee's possible capacity for language from its proven inability to utter the sounds of the language. Since use of the hands is a prominent feature of chimpanzee behavior, the Gardners employed visual rather than vocal signals by teaching a chimpanzee the same American Sign Language that is used with deaf children in North America. The Gardners theorized that their infant female chimpanzee, Washoe, should see as much sign language as possible, since they knew that merely exposing a human child to speech triggered its language-learning capacity. They took great care to keep her isolated from all other chimpanzees and from most human beings as well. The Gardners always communicated with each other in sign language whenever Washoe was present, and in addition they demanded that anyone who was in contact with her remain silent and instead use hand signals.

Their efforts were rewarded almost immediately. Washoe began to repeat the gestures she was taught and also those she noticed the Gardners using between themselves. She built up a vocabulary of thirty-four words in less than two years. Much more important, when she learned a new word she enlarged its application from the specific thing it labeled to an entire class of similar objects. For example, she first learned the sign for "hurt" in reference to scratches and bruises, but later she used the same sign to indicate stains, a decal on the back of a person's hand, and a human navel. And she was able to communicate about things that were not present—as when, for instance, she heard a distant bark and immediately made the hand signal for "dog."

Her proficiency soon went beyond the mere naming of things. She learned verbs and pronouns—and she invented combinations of signs which she used correctly in appropriate speech situations. She combined the signs for "open," "food," and "drink" when she wanted something from the refrigerator and the signs for "go" and "sweet" when she wanted to be taken to a raspberry bush. Before she was six years of age, she had a vocabulary of 150 signs that she could combine to describe situations entirely new to her. At this writing, in mid-1973, Washoe is living at the University of Oklahoma with a colony of chimpanzees who are also being trained in sign language. As yet, no sign language communication has taken place among them. Whether or not Washoe will transmit the signs she has learned to her progeny will not be known until 1974 or 1975 when she becomes old enough to reproduce. She has, however, already demonstrated that she can at least spontaneously communicate with human children who know sign language—even though her status still remains that of an ape. One poignant illustration of that occurred when a mute girl and her parents came to visit the Gardners. Washoe spotted the child and eagerly rushed across the yard to play with her, excitedly giving the sign for "child." But the girl, seeing a chimpanzee come bounding toward her, responded by tickling her ribs —the sign for "ape."

Washoe has successfully bridged the barrier between human and nonhuman communication, although she required human help to do so. She progressed from uttering a small number of automatic cries, which referred only to immediate emotions or situations, to learning a language system in which elements could be combined to make further statements. Beyond any doubt, she has learned more of a language, although in visual terms, than any other nonhuman before her. Nevertheless, Washoe's achievement falls far short of the human child's. The fact that a child at an equivalent stage of development has a vocabulary of thousands of words instead of only 150 is the least significant difference. More important, Washoe apparently does not understand the principles of sentence structure, as children do by age three when they construct sentences according to the patterns offered by their languages. An English-speaking child, for example, knows the difference between the subject-predicate-object pattern of *Baby going home* and the question pattern of *Is baby going home?*—but Washoe does not. When Washoe wants to be tickled, she signals any one of several combinations that have no reference at all to sentence structure: *you tickle, tickle you,* or *me tickle.*

The major deficiency in Washoe's accomplishment, though, concerns the relationship of language to human thought. Human beings conceive of their environment as interlocked objects, properties, and actions. A chair is not simply a kind of object; rather, it belongs to a particular category of objects. Because it is inanimate it can be broken—but it also lacks animate characteristics, which means that it cannot

drink milk. That is why *chair* can take a verb that refers to inanimate subjects, *break,* but not a verb that refers to animate things, *drink*. A child who unravels a simple statement like *The chair broke* thus must do more than decode a grammatical utterance. He must first master the subtle category of things that break, like chairs and also machines and windowpanes. Then he must distinguish the category of things that break from things that tear, like paper and bedsheets, or things that smash, like vases and cars. The child must next interpret the influence on the chair of the verb *broke* out of all the possibilities that verb implies, such as that the breaking of a chair is conceptually different from breaking the bank at Monte Carlo or from waves breaking on a beach. To achieve all this, the child unconsciously unravels the sentence into parts that can be analyzed—and then puts the elements together again in a meaningful fashion. Nothing in Washoe's behavior indicates that she uses language in this metaphorical way, which is, after all, the very hallmark of the human mind.

About the time that the Gardners began their experiments with Washoe, David Premack, a psychologist at the University of California, started to teach a chimpanzee named Sarah to "read" and "write" by means of a code of variously shaped and colored pieces of plastic, each of which represented a "word." By 1972 Sarah had mastered a vocabulary of more than 130 different pieces of plastic—and amazingly, she seems able to understand the grammatical relationships between words that Washoe does not. She often makes correct choices between questions, between the concepts of "same" or "different," between the ideas of color and size. She has even shown that she can understand the complex grammatical structure of a compound sentence. When her trainers arranged plastic pieces to mean "Sarah, put the apple in the pail and the banana in the dish," she responded by the appropriate actions. To do so, she needed to understand that *apple* and *pail* belonged together, but not *apple* and *dish.* Moreover, she had to know the grammatical function of *put,* that it referred to both *apple* and *banana*—and she had to interpret the sentence to mean that she herself was the one who was supposed to do all of these complicated things.

Despite Sarah's remarkable responses, serious doubts remain about whether she has achieved language as human beings know it. Since she performs correctly only about 75 to 80 per cent of the time, the question arises of whether or not she has truly internalized the rules of her language. She appears to handle language in somewhat the same way that trained pigeons are able to "play" Ping-Pong. The pigeons, of course, are not truly playing the game of Ping-Pong. They do not unconsciously know the rules of the game even though they go through the motions of it; they lack the desire to win, the satisfaction of a successful play, individual styles, the selection of one strategy in place of another at various stages of the game. Evidence for a lack of internalization is Sarah's failure to generate sentences on her own, accepting instead those offered by her trainers for her to read and to reply to.

The Clever Hans Phenomenon

A further question raised is whether or not the "Clever Hans Phenomenon" is operative with Sarah. Hans was a horse that amazed audiences in Berlin about 1900 by his uncanny ability to solve mathematical problems. He tapped out the correct answers with his forefeet—but he did so only when he had an audience. Numerous sophisticated experiments finally revealed that Hans possessed no uncanny mathematical ability but rather a very uncanny ability to detect nonverbal communication in his audience. He kept tapping as long as he detected that the audience was tense with excitement. But when he reached the correct answer—which was signaled by the sudden relaxation of the audience's facial and body muscles—he immediately stopped. Since Sarah performs better with some experimenters than with others, it is very possible that she also is detecting nonverbal cues.

Both Sarah and Washoe had to be taught language by human beings, but the honeybee has on its own evolved a communication system that possesses most of the features of human language—although it does so in a trivial way. When a foraging honeybee locates a source of pollen or nectar, she brings a sample of her find to the hive and thereby informs the other workers about the kinds of flowers to look for. She also tells them the exact distance to the source by the tempo of a dance she performs in the form of a figure eight. And the exact direction in which to fly (after, unbelievably, the dancer compensates for wind direction!) is indicated by the angle of the dance path. The dance thus conveys two kinds of information: the distance from the hive to the food source and the direction based on the angle of the sun. The other workers use this information to fly unerringly to a source that is sometimes as far away as eight miles.

Strictly speaking, the bee dance meets most of the criteria for a language. It uses arbitrary symbols (the various movements of the dance); it combines them in apparently infinite ways to communicate about something remote in space and time (the food source); and it constantly communicates about situations that the bees have never before experienced because each food source is a unique occurrence at a particular time and place. The bee dance, though, is severely limited as to what it can communicate. It always contains two, and exactly two, components: distance and direction. If the other bees in the hive refuse to respond to the communication by the forager, she cannot express the message in any other way. She cannot ask the question "Why don't you fly to the food?" nor can she issue the imperative

"Fly out and forage!" She can only repeat her dance over and over again.

The topics that bees can communicate about—food and new locations for hives—are undoubtedly of endless fascination to them but of limited interest to almost all other living things. Bees cannot use their language to explain English grammar, but human beings can speak about the way bees dance to communicate the location of food. Human language is unique in being usable as what linguists call a "metalanguage": it can state the rules of any communication system, including its own. In other words, only human language can talk about language. A speaker can discuss the dance of the bees or anything else that he cares to, even when it is foolish or a lie. Because human beings alone possess language, they can hurdle the barriers of time and space, have a history, speculate about the future, and create myths.

The study of animal communication reveals that human language is not simply a more complex example of a capacity that exists elsewhere in the living world. One animal or another may share a few features with human language, but it is clear that language is based on different principles altogether. As far as is known, people can speak because of their particular kind of vocal apparatus and their specific type of mental organization, not simply because of their higher degree of intelligence. No prototype for language has been found in the apes and monkeys, and no parrot or myna bird has ever recombined the words it learned into novel utterances. In contrast, every human community in the world possesses a complete language system. Obviously, something happened in the evolutionary process to create Man the Talker. But what was it?

Since sentences do not leave anything equivalent to the fossils and pottery shards that allow anthropologists to trace the prehistory of man, linguists can only speculate about the origins of language. Theories have been advanced, have won adherents for a while, then later were shown to be fanciful—and given derisive baby-talk names. Because some of these theories occasionally reappear today in new guises, let me mention several of them as a guide to the wary.

Bow-Wow Theory

The Bow-Wow Theory says language arose when man imitated the sounds of nature with onomatopoeic words like *cock-a-doodle-do, cuckoo, sneeze, splash,* and *mumble.* This theory has been thoroughly discredited. It is now known that many onomatopoeic words are of recent, not ancient, origin and that some of them did not derive from natural sounds at all. But the most telling argument against the Bow-Wow Theory is that onomatopoeic words vary from language to language. If the human species had truly based its words on the sounds of nature, these words should be the same in all languages because of the obvious fact that a dog's bark is the same throughout the world. Yet, the *bow-wow* heard by speakers of English sounds like *guagua* to Spaniards, *af-af* to Russians, and *wan-wan* to Japanese.

The Ding-Dong Theory dates back to the ancient philosophers and was long honored, but nowadays it has no support whatsoever. This theory claims that everything in nature gives off a harmonic "ring," which man supposedly detected when he named objects. But the Ding-Dong Theory cannot explain what resonance a small four-footed animal gave off to make Englishmen call it a *dog* rather than any other arbitrary collection of vowels and consonants—and what different resonance it communicated to Frenchmen to make them call it a *chien* or to Japanese to make them call it an *inu.*

Still other explanations for the origin of language are the Pooh-Pooh Theory, which holds that speech originated with man's spontaneous ejaculations of derision, fear, and other emotions; the Yo-Heave-Ho Theory, which claims language evolved from the grunts and groans evoked by heavy physical labor; the Sing-Song Theory, which placed the origin of speech in the love songs and the rhythmic chants of early man.

Most linguists today despair of ever finding the roots of language. Evidence about language goes back only as far as the earliest written documents, a mere 5,000 years or so ago. But by that time languages were already fully developed and not significantly different in kind from those spoken today. Since no hope exists of discovering a record of the earlier stages, a much more fruitful pursuit is the study of how human beings today acquire their languages.

Carolus Linnaeus, the eighteenth-century inventor of the system of classification of living things still in use, listed *Homo ferus,* Latin for "wild man," as a subdivision of our species, *Homo sapiens.* The characteristics of the feral form of human life, he declared, were hairiness, walking on all fours—and lack of speech. When Linnaeus made his classification, he knew of ten cases of "wolf children" abandoned by their parents to fend for themselves and purportedly nurtured by wild animals. Since then nearly thirty more cases have been thoroughly documented, although it has never been demonstrated that these children were reared by wolves or by any other animals. Scientists and philosophers early recognized the importance of "wolf children" because such wild creatures provide natural experiments in the way man develops his behavior isolated from society. In fact, the capture of "Wild Peter" in Hanover, Germany, in 1724 led a scientist to proclaim that he was more important than the discovery of 30,000 new stars. When the twelve-year-old "Wild Boy of Aveyron" was captured in 1797 in France, contemporary readers of Rousseau anticipated that he would display the virtues of the "noble savage" uncontaminated by civilization. Scholars anxiously awaited his first words, which they conjectured would be man's "natural" language,

most probably Hebrew. They were disappointed. The Wild Boy was not particularly hairy, as Linnaeus claimed, but he did trot along on all fours—and he was inarticulate.

A young French physician, Dr. J. M. G. Itard, expressed the belief that the speechless Wild Boy of Aveyron was not the "incurable idiot" that a leading scientist of the time had concluded. Itard set out to instruct the boy, whom he named Victor, in language. After five years of extraordinary patience, Itard showed that Victor possessed a capacity to learn many things—but not language. Victor did manage to understand a few simple words and phrases and to read written commands, but he never did learn how to speak. In contrast, a six-year-old abandoned girl, discovered in Ohio in the 1930's, was also instructed in language—and in only two years she progressed through six years of language learning. By the time she was eight and a half, her speech was little different from that of other girls her age. Although a few doubts remain to this day whether or not Victor was mentally deficient, he apparently failed to learn speech because he had missed the opportunity at a critical age. By the time he was captured as a twelve-year-old, his ability to speak could never again be recovered.

Baby Talk

A complete contrast to "wolf children," abandoned to the wild, are normal children reared by doting parents. But the notion that children learn to speak merely by imitating their parents, somewhat like intelligent parrots, is sheer folklore. Unlike parrots, children are linguistically creative at a very early age. They say all kinds of things they have never heard from adults—and they often put together combinations of words which they use in speech situations novel to those utterances. For example, one linguist was able to tape-record the following sequence of words that were prattled by a three-year-old child who had just been put to bed:

pig (repeated many times)
big
sleep
big pig sleep now

The linguist was certain that the child had never encountered the final utterance in a storybook or heard it in conversation. For that child, it was a totally new creation.

Parents usually do not realize that they unconsciously speak differently to children, even those six or seven years old, than they do to adults. They exaggerate changes in pitch and sometimes they speak almost in singsong; they utter their words more slowly; they use simple sentence structures. And the sounds of their speech are much more precise, as seen, for example, in the pronunciation of *butter.* Most adults speaking to other adults pronounce it almost as if it were spelled *budder,* but in speaking to a child they usually use the strong *t* sound of *table.* Such careful attention to speech when talking to children is, however, different from the baby-talk words like *choo-choo* and *itsy-bitsy* heard in communities around the world. Baby-talk words, rather than representing a "natural" vocabulary that a child instinctively uses, actually are taught to children by adults—who, after a few years, then force the children to stop using them. Baby talk is simply a variation of the adult language—invented by adults for the sole purpose of talking to very young children. Once baby talk becomes part of the language system of speech communities, it persists for long periods. Some Latin baby-talk words are still being used in Romance languages after two thousand years, like the Spanish *papa,* "food," which derives from the Latin *pappa.*

The Comanche Indians of the North American Plains begin to teach their children a rich vocabulary of special baby words when they reach about one year of age. But shortly after the child learns baby talk, he is discouraged from using it. By age five he is supposed to switch to normal, adult language, but if he fails to make the transition at the appropriate time he is ridiculed for his childish ways. Comanche baby talk uses a limited number of the more simple sounds in the language, such as *p, b, m, t, d, k,* and a few basic vowels. The words are almost always reduplicated—that is, a single syllable is repeated. For example, Comanches transform their adult word *pia,* which means "mother," to *pipia* when speaking to children, much as English-speaking children are taught to say *nighty-night.*

Most of the Comanche baby-talk vocabulary seems preoccupied with words for snakes, fire, wounds, darkness, thunder, and mythological bogeymen—all obviously intended to frighten the child—and with words that admonish the child to control his actions and be obedient. The same baby word, *asi,* could be used by the child to say that he had a bowel movement, to point out feces or anything else that Comanche society deemed filthy, to complain about a bad smell, or to talk about his penis. The equating of disgust with feces, dirt, and the genitals in baby talk says nothing about Comanche children but indicates adult attitudes about the human body.

Baby-talk vocabulary has been compared in six quite different languages from around the world: two Major European languages (English and Spanish), two major languages of Asia with strong literary traditions (Arabic and Marathi), one language of a small nonliterate community in Siberia (Gilyak), and one language of a small nonliterate community in North America (Comanche). The actual baby-talk words in the six languages were of course different—but nevertheless the vocabularies revealed surprising similarities in linguistic characteristics. All the languages simplified clusters of consonants (as English speakers do when they substitute *tummy* for *stomach*); they replaced *r* by some other consonant (such as *wabbit* for *rabbit*); they reduplicated syllables (*choo-choo, wee-wee*); and most of the languages dropped unstressed

syllables (as when *goodbye* becomes *bye*). The six languages altered words to form diminutives (such as the English *y* in *doggy, horsey,* and *dolly*) and substituted words to eliminate pronouns (*Daddy wants* instead of *I want*). We might expect that people from six widespread cultures would want to talk about different things with their children—but the items in the baby-talk vocabularies were very much the same. Almost all of the words referred to bodily functions, good or bad behavior, sensations like hot and cold, names of common animals, and kinship terms for close relatives.

Since children do not instinctively speak baby talk, what could possibly be the explanation for its prevalence around the world? Most adults in the six cultures claimed that baby talk made it easier for children to learn to speak. It is indeed true that in most cases baby-talk words have simpler consonant arrangements and fewer vowels than adult languages. On the other hand, some baby-talk systems, such as that of Arabic, employ difficult sounds which children do not ordinarily master until they have considerable experience in speaking the adult language. And is it really easier for an English-speaking child to say *itsy-bitsy* than *tiny*? Despite such exceptions, folk wisdom about baby talk apparently is correct; it does give children practice in speaking. Baby talk presents the child with a stock of simple utterances, and reduplication increases practice in their use. These utterances can gradually be discarded when adult words begin to be used, by which time they have served their purpose. Reduplication does, though, persist into adult languages, often to a much greater extent than in English, which has comparatively few examples: *helter-skelter, fiddle-faddle, hocus-pocus, mish-mash,* and *teeny-weeny*. Other languages sometimes even make reduplication serve functional uses, as when Indonesians say *igi-igi-igi-igi* to emphasize the idea of "multitudes"—and when the Ewe of Africa form the reduplicated utterance *gadagadagada* to express intensity, in this case the intense heat of a fire.

The most common sounds in baby talk—the consonants made with the lips, such as *p, b,* and *m*—are the first ones the child can make, probably because the lips are used early for nursing. The next three consonants a child learns are formed with the teeth and gums—*t, d,* and *n*—and they are almost as important in the early stages of speech as the first three. So it is not surprising that the earliest words infants speak are those like *papa, dada, baba, mama,* and *nana.* At first children simply utter these sounds without reference to any particular people—and so most parents are incorrect when they believe the sounds refer to a recognition of father, brother, mother, and nursemaid. A sampling of "mother" and "father" words shows the importance of the six consonants that are learned first:

	"MOTHER" WORDS	"FATHER" WORDS
French	*mère*	*père*
Welsh	*mam*	*tad*
Turkish	*ana*	*baba*
Hebrew	*ima*	*aba*
Russian	*mat'*	*otyets*
Mongolian	*eme*	*echige*
Crow Indian	*masake*	*birupxe*

The cause for the similarities in "mother" and "father" consonants is controversial, but the explanation is more apt to lie in the universal way that children learn to speak rather than in some common origin of these languages in the very distant past.

Neither the grunts of wolf children nor the adult-imposed system of baby talk reveals anything about the way in which almost all healthy children reared within a social framework acquire their language. Most communities have long believed that the human infant comes into the world inarticulate—and in fact the very word *infant* is derived from a Latin word that means "unable to speak." In an obvious way this belief is correct. The cry of an infant at birth, the pain cry when being vaccinated, the hunger cry several hours after a feeding, and the pleasure cry when being held—these expressions of emotions certainly are not language.

Yet, the infant emits a cry—and soon the hospital nurse, later his mother, responds in a way that is pleasurable. The infant has learned that language is a social instrument that evokes a response from other human beings. In the first days of life the child is already responsive to a sound and tries to move his head toward its source. Only a few weeks later he responds to the high-pitched female voice more readily than to any other sound. Soon the infant coos and babbles and makes other noises, and he notes that his mother reacts to each in a different way. The child has learned the appropriate use of speech in various situations.

Children normally begin to speak as early as eighteen months, occasionally as late as twenty-eight months; in the exceptional case of Albert Einstein the onset of speech was not until nearly age three. Certainly all mothers have not mutually agreed that it is time to teach infants to talk when they are approximately two years old. But the effort to learn what triggers a child's speech is somewhat like a problem presented to engineering students. They are shown a black box with wires leading in to it and other wires leading out, and these produce an electrical result. The students must then try to infer the internal wiring of the box solely on the basis of the input-output relationships. The child's mind presents a similar sort of problem. It is a black box (or "language-acquisition device," as it has been called) that cannot be looked into in the living child. The linguist knows only that the language-acquisition device receives input in the form of relatively few utterances, which emerge as utterances in accordance with the grammar of the child's native tongue. Furthermore, the mysterious device in the child's mind works wherever he happens to spend the first several years of life, with the result that the language he learns is that of his native community.

Noam Chomsky has given fresh insights to those psychologists and linguists who are attempting to discover how the language-acquisition device

works. In an earlier period of psycholinguistic research, many psychologists were influenced by such behaviorists as B. F. Skinner and Ivan P. Pavlov. The behaviorists visualize the child's mind at birth as a blank slate that lacks any inborn capacity to acquire language. The fact that the child does eventually speak is attributed solely to training, in much the same way that an animal can be conditioned to learn by offering it rewards and other reinforcements. The behaviorists think in terms of the child building up his language piece by piece in accordance with the orders given by the adult generation, which rewards him when he speaks correctly and ridicules him when he speaks incorrectly. This view sees learning language as little different from learning manners.

Chomsky's Blueprint

Chomsky instead regards language as a creative instrument that is the birthright of all healthy human children, who acquire it as a by-product of growing up, simply by exposure to it. They are born with a blueprint for language which they use to analyze the utterances heard in their speech community and then to produce their own sentences. To Chomsky, the influence of training is minimal.

He feels that his theory can account for a basic and mystifying fact about language acquisition. The child hears a relatively small number of utterances, most of which are grammatically incorrect or misunderstood—yet, on the basis of this scanty and flawed information, in his preschool years and with no special instruction, he discovers for himself the complex grammatical rules of his speech community. The only way this fact can be explained is to assume that the child is born with competence in the structure of language, in the same way that a child is genetically endowed at birth with numerous other abilities that make him human. The situation is somewhat like learning to walk. The child possesses at birth the blueprint for the muscular coordination that he will develop later in order to walk. No one tells him how to lift his legs, bend his ankles or knees, or place his feet on the ground. He does not consciously arrive at the skill of balancing himself on his legs, any more than a three-year-old consciously figures out the rules for grammatical transformations. The child walks and talks—and in neither case does he know exactly how he did it.

Strong evidence supports Chomsky's view. Only human children learn to speak, thus indicating that some sort of blueprint for language must be transmitted from generation to generation in our species. And children everywhere develop a language without formal instruction, unless they are isolated as "wolf children" during the critical acquisition years or unless they suffer from extreme mental deficiency. Bright children and stupid children, trained children and untrained children, all learn approximately the same linguistic system. Some street urchins do not have parents to instruct them, but they learn to speak nevertheless—and, as can be seen in international cities like Tangiers and Singapore, the homeless child may speak several languages fluently. But the same thing cannot be said about developing other skills, such as arithmetic or playing a musical instrument, both of which require long years of training. If two violin students take lessons from the same teacher and devote equal time to practice, one may become merely a good player while the other becomes a virtuoso.

At the same time that the child is acquiring grammatical rules, he is also learning rules for the correct use of his language in the various speech situations of his community. By age two or so, children already use speech to get what they want, to talk about things they know will interest the listener, and to influence the social behavior of others. They know some of the occasions on which it is proper to shout or to whisper; they know that it is permissible to say *gimme* to certain people but to use *please* in other speech situations; they have some idea of differences in age and rank of listeners and the kinds of speech appropriate with a child or an adult, with a stranger or a neighbor. Only a little later children begin to play word games and to make up nonsense rhymes—clear evidence that they have already internalized the rules and can exploit the alternative possibilities of their language. While most children acquire their grammar at a steady rate, largely insulated from major influences in the social environment, learning the appropriate use of language depends upon the speech community in which the child grows up and the social group to which he belongs. Children from various social classes differ considerably in their abilities to talk about certain things, and to do so in the appropriate situations. Middle-class white children in the United States usually place a high value on the ability to read at an early age; lower-class black children may consider such a skill irrelevant and are likely to emphasize nimbleness in verbal encounters.

The age at which a child is considered capable of understanding speech varies greatly from culture to culture. Most Europeans feel that children cannot comprehend what is said to them until they are a year or so old. In contrast, the Ashanti of Ghana believe that a fetus possesses the ability to understand speech and they sometimes address questions to it in the womb. Psycholinguists now know that infants are aware of speech at a very early age, although not quite so early as the Ashanti believe. Before the age of one month, the child associates the sound of the human voice with pleasurable sensations, such as feeding, fondling, and the changing of diapers. Very soon afterward, the child detects different emotional attitudes in the speaker's tone of voice and responds by smiling or crying. A two-month-old infant in an English-speaking community often discriminates, in his own vocalizing, between the sounds *p* and *b*, which is a very exact discrimination indeed. A

child's language gradually unfolds in a sequence of stages during the first few years of life. A parent can say to a child "Speak only when spoken to," and the child may obey—but the language-acquisition device in the child's brain will not obey. Biology does the work, and fond parents can add little except simply to talk within earshot of the child. The course of language for most normal children, regardless of the speech communities they are born into, is thought to be keyed to motor development—as seen below in one possible correlation—although some researchers believe it is keyed to a child's general cognitive development.

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When supports head while lying on stomach (age about three months): The infant responds to speech by smiling and by making the gurgling sound known as "cooing," which is vowel-like and has pitch.

When plays with a rattle placed in hands (about four months): The infant turns his head and eyes to seek the source of a speaker's voice. He adds chuckling noises to cooing.

When sits propped up (about five months): The vowel-like cooing sounds now become interspersed with consonant-like sounds.

When can bear own weight if held in a standing position (about six months): Cooing changes to babbling of one-syllable utterances like *ma, mu, da, di.*

When picks up objects with the thumb and forefinger (about eight months): Reduplication, such as *mama* or *dada,* becomes frequent. Strings of sounds are expressed with emphasis and seem to signal emotion. Intonation, as heard in adult questions and exclamations, becomes noticeable.

When pulls self to standing position (about ten months): Bubble blowing and other sound play is now added to vocalizations. The infant apparently tries to imitate sounds but is rarely successful. He begins to discriminate among words by reacting differently to utterances.

When walks held by one hand (about one year): The infant definitely understands some words and attempts to carry out simple commands. He can also speak a few words.

When creeps down stairs backward (about one-and-a-half years): The child is now on the threshold of speech and displays a much greater understanding of what is said to him. His vocabulary consists of between three and fifty words, although no attempt to communicate information is made as yet. He can utter brief stock phrases, such as *thank you,* but he does not attempt to join these into complicated statements.

When walks up or down stairs (about two years): The typical child now has a vocabulary of more than fifty words and can name almost everything he has daily contact with in the home or on walks. Rather than repeating stock phrases, he often utters two-word phrases that are his own creation. Language acquisition gains momentum and a definite interest in words is displayed.

When jumps with both feet (about two-and-a-half years): Vocabulary increases very rapidly and new words are added daily. Babbling ceases. Utterances are intended to have communication value, and the child is frustrated when he is not understood. He seems to understand almost everything and he responds with statements up to five words in length.

When rides tricycle (about three years): This stage marks the end of the naming explosion, at which time the child has a vocabulary of about a thousand words. He probably understands an additional two or three thousand words he has not yet learned to use. The grammatical complexity of the utterance is about equal to that of colloquial adult speech, though errors occur.

When catches ball in arms (about four years): The child has now mastered the essentials of his native tongue.

• • •

A child of four has performed an awesome intellectual achievement. He has not merely learned the names of things but has acquired an entire linguistic system that enables him to create sentences for the rest of his life. If among the words a child knows are *hill, water, Jill, fetch, Jack, pail,* and *go,* he may eventually put them together into a sentence like *Jack and Jill went up the hill to fetch a pail of water.* Think for a moment how remarkable this sentence is. The child has taken a random assortment of words and given them order. *Jack* and *Jill* do not appear just anyplace in the sentence but at the beginning of it where they are made to serve as the subjects of the verb *go.* Equally important, the child added what are known as "markers" in the form of functor words (*and, up, the, to, a, of*). Functors identify the different classes of words (as when *the* or *a* indicates that a noun follows); they specify relationships between words (*and,* for example, ties together *Jack* and *Jill*); and they signify meanings by the tense of the verbs. If the child had arranged the same words differently—such as *Jack fetched Jill's pail of water and went up the hill*—he would have used other markers (*-ed* and *-'s*) and a different word order. The child knows unconsciously that he should not use the markers in the second sentence to construct the first kind of sentence, since his grammar tells him that a sentence like *Jack and Jill's went up the hill to fetched a pail of water* is an impossible grammatical construction in English.

Considerable dispute exists as to exactly how a child of four or five attains such remarkable proficiency in these, and even more difficult, grammatical tasks. One explanation is that the child codes the words he learns into grammatical classes. For example, if a child possesses a category that he codes as "nouns," then he recognizes words belonging to this class whenever they occur. He knows that they can be used in sentences only in certain ways and that they are associated with certain markers (such as *the* and *a*). He also realizes that not all words in English are equal. Some content words (such as *Jack, Jill, went,* and *hill* in the nursery rhyme quoted in the previous paragraph) carry important burdens of meaning while other functor words (*and, up, the,* and so on) can be elimi-

nated with a high probability that the message will still be understood. Adults employ the distinction between content and functor words when they send a telegram and eliminate "unnecessary" words. The telegram ARRIVING KENNEDY SEVEN TONIGHT AMERICAN easily enough translates as "I will be arriving at Kennedy Airport at seven o'clock tonight on American Airlines." "Telegraphic" English communicates very well because it retains the content words like *arriving* and *Kennedy* that one would have difficulty in guessing and eliminates the functor words that can easily be guessed (*I, at, on*)—for the functor words alone are jibberish.

Young children employ much the same sort of telegraphic speech when they say *Where baby?* for *Where is the baby? Where* and *want* are among the most common "operator" words of children at certain ages, although most children go through fads in their preferences for particular operators. They fasten on a favorite operator and then use it with a variety of other words belonging to a single class, in that way learning the entire class. For example, a child who for a time regards *want* as a favorite operator will employ it with most of the nouns he knows to create two-word sentences like *want outside, want doggy,* and *want milk.* Children are also very exact in discriminating between the noun class, which refers to things, and the verb class, which refers to actions. In a typical experiment, preschool children were given a selection of pictures and then asked to associate them with nonsense words. When they heard *a sib,* they immediately reached for pictures that showed a single object, thereby indicating that they had put *a sib* into the class of singular nouns. When asked to show *some sibs,* they reached for pictures of confetti-like material (the class of plural nouns) —and when asked to find something *sibbing,* they selected pictures showing action (the class of verbs). Since the words themselves were meaningless, the children obviously made correct choices because grammatical clues helped them to recognize that the words belonged to certain classes.

By age four, the child is well on the way to knowing these and other aspects of grammar. During the next several years, this knowledge is consolidated, becomes automatic, and is extended to include words with irregular patterns (*men* and not *mans* as the plural of *man*). A six-year-old child may use *he bought* and *he buyed* interchangeably—but he usually corrects himself, showing that he knows the proper form even though he does not yet employ it automatically. The child continues to refine his speech in this way until about age ten, by which time he has internalized all of the complicated rules of his native grammar. Children soon outgrow their ability to acquire language with little effort, as is realized by high school students and adults who try to master a language in addition to their mother tongue. Whether or not a child will speak a foreign language with an accent depends upon the age at which he learns the second language. A child who enters a foreign-speech community by about age three or four learns the new language rapidly and without the trace of an accent. During the next several years, such facility declines slightly. But then, around the age of puberty, an irreversible change takes place, and practically every child loses the ability of learning to speak a second language without an accent.

The unfolding of a child's language is a wondrous thing to listen to, as every parent knows. Working with an extremely limited vocabulary, poorly pronounced and the meanings only dimly understood, the child produces the grammar of his language. No amount of reward, praise, or punishment makes him do a substantially better or worse job. He of course makes many errors at first, but eventually he puts together a grammar that is equal to the grammar of the people in his speech community who talked to him and played with him during the critical years of language acquisition. As in the development of his personality, the child has used his innate potential to create something very much like that of other people in his community, yet also something uniquely his own.

Prisoners of Speech

Creative as every human being is in putting together novel statements and using them in various speech situations, no one is free to use his ability in any way he wishes. Indeed, freedom of speech does not exist anywhere because every community on earth forbids the use of certain sounds, words, and sentences in various speech situations. In the American speech community, for example, the habitual liar faces social sanctions —and criminal punishment—should he lie under oath. Speakers are not allowed to misrepresent what they are selling, to defame other people in public, to shout "Fire" maliciously in a crowded movie theatre, or to utter obscenities on the telephone. In addition other, less obvious, constraints upon freedom of speech may exist. They may be the structures of languages themselves—and they may as rigidly proscribe the speaker as do the community's social sanctions.

Every moment of the day the world bombards the human speaker with experiences. It clamors for his attention, claws at his senses, intrudes into his thoughts. Only a very small portion of this total experience is language—yet the speaker must use this portion to report on all the experiences that exist or ever existed in the totality of the world since time began. Try to think about the stars, a grasshopper, love or hate, pain —anything at all; it must be done in terms of language. Thinking is language spoken to oneself. Until language has made sense of experience, that experience is meaningless.

This inseparableness of everything in the world from language has intrigued modern thinkers, most notably Ludwig Wittgenstein of Cambridge University,

who was possibly this century's most influential philosopher. He stated the problem very directly: "The limits of my language mean the limits of my world." Wittgenstein offered pessimistic answers to questions about the reliability of language to reveal the world, claiming that language limited his ability to express certain ideas and opinions. Nevertheless he did manage to say a great deal about topics he felt were inexpressible. By the time of his death in 1951, Wittgenstein had arrived at a more positive view of language. If its limits—that is, the precise point at which sense becomes nonsense—could somehow be defined, then speakers would not attempt to express the inexpressible. Therefore, said Wittgenstein, do not put too great a burden upon language. Learn its limitations and try to accommodate yourself to them—for language offers all the reality you can ever hope to know.

Through a Glass Darkly

For perhaps hundreds of thousands of years, man saw language as a holy instrument that let him look out upon his world in wonder, fear, and joy. "In the beginning was the Word" is the reassuring first line of the Gospel According to Saint John. Only in the last few decades have people suspected that their window on the world has a glass that gives a distorted view. Language no longer is certain to open up new sights to the imagination; rather, it is thought by some to obscure the vision of reality. The French philosopher Jean-Paul Sartre, who has often written about what he calls today's "crisis of language," has stated: "Things are divorced from their names. They are there, grotesque, headstrong, gigantic, and it seems ridiculous to . . . say anything at all about them: I am in the midst of things, nameless things." Indeed, in this century many of the foundation "things" of civilization—God, truth, fact, humanity, freedom, good and evil—have become nameless and have lost their traditional reference points. An entire generation has grown up distrusting language's ability to express a true picture of reality and relying upon the empty intercalations of *like, you know, I mean.* The world has grown inarticulate at the very time that an unprecedented number of words floods the media. A statistical study of telephone speech showed that only 737 words were used in 96 per cent of such conversations. Apparently people speak more, yet say less.

Exaggerated anxieties about language's ability to express reality result in the pathology of "logophobia" (literally, "fear of words"). Logophobia has found popular expression in recent decades in the movement known as General Semantics. Two books with this point of view have had a wide readership—Stuart Chase's *The Tyranny of Words* and S. I. Hayakawa's *Language in Action*—and both derive their ideas largely from the writings of a Polish count. Alfred Korzybski (1879–1950) was an engineer, an officer of the Russian army, an official at the League of Nations, and a researcher into mental illness after he migrated to the United States. The key element in his theory about language was "The map does not represent all of the territory." That is, no matter how much detail a cartographer puts into a map drawing, it can never represent all of the ridges, slopes, valleys, and hillocks in a territory. Korzybski similarly believed that language can no more say everything about an event than the map can show everything in a territory. *The grass is green* cannot be a true utterance because it is incomplete. What kind of grass? Where is it growing? What shade of green is meant?

Korzybski felt that speakers could nevertheless emancipate themselves from language's tyranny by changing their orientation. They must imitate mathematics as a way to state precise relationships between things; they must avoid abstractions; they must be wary of the troublesome word *is* because it often implies an identification that does not exist in reality. Freedom from language's distortions would be achieved by rigorously rating all statements to determine whether speakers could back them up. And no longer would general words that expressed categories be acceptable. A *cow* would not be just a cow but a particular kind of animal with certain characteristics and named "Elsie."

Almost all linguists reject Korzybski's theories as inadequate and logophobic. Nevertheless, he did isolate a logical contradiction: language is supposed to communicate experience, yet by its very nature it is incapable of doing so. Picture an autumn scene with a single leaf close up—its color scarlet and edged with burnished gold, the spaces between the veins eaten out by insects in a filigree pattern, the edges gracefully curled, the different textures of the upper and lower surfaces, the intense light of Indian summer falling on the leaf. And this leaf that I have scarcely begun to describe is only one out of the countless millions that surround someone strolling in the autumn woods, each unique in its color and shape, the way it catches the light and flutters in the breeze.

How can language possibly render such an experience? The obvious fact is that it cannot—and few people would want it to, for such detail would bog down language in a morass of trivial observations. People do not demand that language describe an entire experience, even if it could. No one confuses speech about a leaf with a real leaf any more than people confuse a painting of a leaf with a leaf. The function of language is not to duplicate reality but to recall it, comment upon it, and make predictions about it. A much more significant limitation upon language is that each language can comment upon experience only in its own way. The languages of interior New Guinea, for example, are severely hampered in conveying even the leaf color because they lack a convenient terminology to express the distinction between red and yellow.

Since human beings are born with the

same senses and approximately the same degree of intelligence, they should be able to report equally well whatever they experience. But different languages make such equality difficult. Imagine two forest rangers, one a white speaker of Standard English and the other an Indian speaker of Navaho, riding together on inspection in Arizona. They notice a broken wire fence. When they return to their station, the English-speaking ranger reports *A fence is broken.* He is satisfied that he has perceived the situation well and has reported it conscientiously. The Navaho, though, would consider such a report vague and perhaps even meaningless. His report of the same experience would be much different in Navaho—simply because his language demands it of him.

First of all, a Navaho speaker must clarify whether the "fence" is animate or inanimate; after all, the "fence" might refer to the slang for a receiver of stolen goods or to a fence lizard. The verb the Navaho speaker selects from several alternatives will indicate that the fence was long, thin, and constructed of many strands, thereby presumably wire. The Navaho language then demands that a speaker report with precision upon the act of breaking; the Indian ranger must choose between two different verbs that tell whether the fence was broken by a human act or by some nonhuman agency such as a windstorm. Finally, the verb must indicate the present status of the fence, whether it is stationary or is, perhaps, being whipped by the wind. The Navaho's report would translate something like this: "A fence (which belongs to a particular category of inanimate things, constructed of long and thin material composed of many strands) is (moved to a position, after which it is now at rest) broken (by nonhumans, in a certain way)." The Navaho's report takes about as long to utter as the English-speaking ranger's, but it makes numerous distinctions that never occurred to the white ranger, simply because the English language does not obligate him to make them. Also, many languages are not as fussy as English is about the tense of the verb—although some languages make even finer distinctions. Several American Indian languages of the Pacific Northwest divide the past tense into recent past, remote past, and mythological past.

The way people talk about the color spectrum, and even perceive it, varies from one speech community to another, even though all human eyes see the same colors because colors have their own reality in the physical world. Color consists of visible wavelengths that blend imperceptibly into one another. No sharp breaks in the spectrum separate one color from another, such as orange from red. But when speakers in most European communities look at a rainbow, they *think* they see six bands of color: red, orange, yellow, green, blue, and purple. Chopping the continuous spectrum of the rainbow into color categories in this way is an arbitrary division made by European speech communities. People elsewhere in the world, who speak languages unrelated to European ones, have their own ways of partitioning the color spectrum. The Shona of Rhodesia and the Bassa of Liberia, for example, have fewer color categories than speakers of European languages, and they also break up the spectrum at different points, as this diagram shows:

ENGLISH:

red	*orange*	*yellow*	*green*	*blue*	*purple*

SHONA:

cipsuka	*cicena*	*citema*	*cipsuka*

BASSA:

ziza	*hui*

The Shona speaker divides the spectrum into three portions, which he pronounces approximately as *cipsuka, cicena,* and *citema* (*cipsuka* appears twice because it refers to colors at both the red and purple ends of the spectrum). Of course the Shona speaker is able to perceive and to describe other colors—in the same way that a speaker of English knows that *light orangish-yellow* is a variant of yellow—but the Shona's basic divisions represent the portions of the spectrum that his language has convenient labels for.

Charts obtainable at paint stores provide samples of hundreds of colors to help home owners select the exact ones they want. An English speaker who glances quickly at one of these charts recognizes certain colors and can name them immediately as *yellow, green,* and so forth. Other colors require a moment of hesitation before the speaker finally decides that a particular hue falls into the category of, let us say, *green* rather than *yellow.* Still other colors demand not only considerable thought but also a hyphenated compromise, such as *greenish-yellow.* Finally, the English speaker finds himself totally unable to name many colors by any of the categories available to him; he is forced to make up his own term or to use a comparison, such as *It looks like the color of swamp water.* The ease with which verbal labels can be attached to colors is known as "codability." The color that a speaker of English unhesitatingly describes as *green* has high codability for him and it also evokes a quick response from speakers of his language, who immediately know what hues fall into that category. Similarly, when a Shona says *citema,* a high-codability color, other members of his speech community immediately know that he refers to "greenish-blue." In contrast, the color that a speaker describes as *like swamp water* has low codability, which means that other speakers cannot be certain exactly what color is meant.

Some linguists have found in color codability a fruitful way to experiment with the relationships between thought and language. In one such experiment, people who served as test subjects were shown a large selection of plastic squares, each colored differently. Usually, when someone sees a color, his mind stores it for a mere few moments and he can identify the color again only if he sees it almost immediately. If a delay occurs, the stored image is no longer a reliable guide because it has become faint and distorted. Yet, when the squares were hidden from sight even

for several minutes, the test subjects could again pick out certain colors—the high-codability ones for which the English language has convenient labels like *red, blue, yellow,* and so on. Subjects were able to remember the high codability ones because they had simply attached common English-language words to them. In other words, they stored colors in their minds not as colors but as verbal labels for them. Even though the images had completely faded from their memories after a few moments, the subjects still remembered the verbal labels they had given the colors—and they were therefore able to identify the plastic squares again. Man's ability to encode experience in this way is not limited to color. Similar experiments have been performed with other experiences—such as the recognition of facial expressions—and the results have been the same.

Experiments like these have shown that at least one aspect of human thought—memory—is strongly influenced by language. That is not the same thing, however, as proving that man is at the mercy of his language. The convenient labels that a speech community gives to certain colors are a great aid in remembering them—but the absence of such labels does not prohibit a community from talking about the low-codability colors. When people develop a need for an expanded color vocabulary—as have artists, decorators, and fashion designers—they simply invent one. Witness the recent plethora of colors for decorating: *riviera blue, alpine green, lime frost, birch gray.*

Nevertheless, the colors that a speaker "sees" often depend very much upon the language he speaks because each language offers its own high-codability color terms. Recently, two anthropologists at the University of California, Brent Berlin and Paul Kay, have attempted to show that speech communities follow an evolutionary path in the color terms they offer their speakers. For example, several New Guinea tribes have in their vocabularies only two basic color words, which translate roughly as "black" (or "dark") and "white" (or "light"). A greater number of languages in widely separated areas of the world possess three color terms—and the startling fact is that they usually retain words for "black" and "white" and add the same third color, "red." The languages that have four color terms retain "black," "white," and "red"—and almost always add either "green" or "yellow." Languages with five color terms add the "green" or the "yellow" that was missed at the fourth level; languages with six terms add a word for "blue," and those with seven terms add a word for "brown."

The conclusion of this study is that the languages of the world, regardless of their grammars, follow an evolutionary sequence, at least so far as color terms go. A language usually does not have a word that means "brown" unless it already has the six earlier color words. A language rarely has "blue" in its vocabulary unless it already has words for both "green" and "yellow." (English, most western European languages, Russian, Japanese, and several others add four additional color terms—"gray," "pink," "orange," and "purple.") Berlin and Kay believe that a language, at any given point in time, can be assigned to only one stage of basic color terms and apparently must have passed through the prior stages in the appropriate sequence.

Such regularity on the part of unrelated languages in adding color terms is astonishing—but equally surprising is Berlin and Kay's correlation of this sequence with the general complexity of the cultures in which the languages are spoken. Languages with only the two color terms "black" and "white" are spoken in cultures at a very simple level of technology—and the only languages known to have all eleven terms are spoken in cultures with a long history of complexity. Between these two extremes are the languages of such peoples as the Tiv of Africa with three terms; the Homeric Greeks and Ibo of Africa with four terms; the Bushmen of Africa and the Eskimos of North America with five; and the Mandarin Chinese, as well as the Hausa and Nupe of Africa, with six. Of course it is understandable that cultures have more need to talk about different colors as they grow more complex. Small bands of New Guinea hunters need to evaluate the darkness of shadows, which might conceal enemies or animal prey; complex European cultures need additional terms to talk about color-coded electrical circuits. Ever since Berlin and Kay put forth in 1969 their startling analysis of the basic color terms in 98 languages, their findings have been under attack, primarily on the basis of questioned methodology and ethnocentric bias. But their general conclusions have also been staunchly defended by other researchers. Apparently Berlin and Kay have isolated some general truths about how people around the world talk about color and the possible

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evolutionary implications of language—even though neither they nor anyone else has been able to offer a suitable explanation for why languages seem to add words for colors to their various vocabularies in such a neat and orderly sequence.

Nor is the way in which a speech community rounds off its numbers haphazard; rather, it is explainable as an interplay between language and culture. Americans and Englishmen have traditionally expressed excellence in sports by certain round numbers—the 4-minute mile, the 7-foot high jump, the 70-foot shot put, the .300 baseball batting average. Once a speech community has established general goals of excellence that are within the realm of possibility, the exact number chosen has little to do with the objective reality of measurable goals. Instead, the community chooses an exact goal that makes sense to it linguistically in terms of the way it habitually rounds off numbers. That is why Americans and Englishmen never talk about the 3 ⅞-minute mile or the 69-foot shot put.

The 109.36 Yard Dash

The British-American target for the 100-yard dash is 9 seconds—but the French, who use the metric system, express the target as 100 meters in 10 seconds. Simple arithmetic shows that the two goals do not refer to equal distances covered in comparable amounts of time. Allowing for 10 seconds of running time, the metric race would mean covering 109.36 yards, and the British-American race would mean covering 111.1 yards. Obviously, the French goal for excellence speaks about a different real distance than the American or English—simply because a Frenchman rounds off his numbers for distances and for time in a different way than English-speaking peoples do. When speakers thus round off numbers to make them manageable, they give preference to those numbers that their speech community regards as significant. Americans see nothing wrong with rounding off numbers to 4 because they are familiar with that number for measurement, as in 4 quarts in a gallon. A Frenchman, however, would not regard such a number as round at all; because of his familiarity with the decimal system, he would round off to 5.

A speech community's unitary system of numbers often bears no relation to the real situation and it may actually work against the best interests of the community. Fishing laws in some American states specify, for example, that up to 6 trout larger than 10 inches may be caught in a day. Research by fish-management specialists might instead indicate that trout would thrive better if 7, and not 6, were larger than 10½ inches—but Americans round off to 6 and 10, not to 7 and 10½. The ideal speed for a stretch of highway, as scientifically determined by engineers, might be 57 miles per hour—but that number will be rounded off to a too-slow 55 or a too-fast 60 because it is customary for highway speeds to be based on the decimal system. Only one justification exists for the use of imprecise rounded numbers: the speech community has decreed that the linguistic ease of inexact combinations is preferable to the linguistic complexity of precise numbers.

That the way speakers round off numbers is often a linguistic convenience is clearly seen by comparing English with other languages. The ancient Greeks rounded off to 60 and 360 for their high numbers; and the old Germanic languages of northern Europe used 120 to mean "many." Most of the Indian tribes in primeval California based their numbers on multiples of 5 and 10—but at least half a dozen tribes found great significance in the number 4, no doubt because it expressed the cardinal directions. Others emphasized the number 6, which probably represented the four directions plus the above-ground and below-ground worlds. The Yuki of northern California were unique in counting in multiples of 8 and in rounding off high numbers at 64.

A misunderstanding about the way Chinese speakers round off their numbers has led many Europeans to state glibly that "In China you're a year old when you're born." That is because most European systems of stating one's age are different from the Chinese. In English, a speaker usually states his age as his closest birthday followed by the measure *years old.* Exceptions are that young children often place their age between two birthdays, as in *I'm three-and-a-half years old,* and parents usually express the age of infants in months and weeks. Chinese also use a round number followed by the measure *swei* in place of the English measure *years old.* Confusion has resulted because *swei* is not exactly equivalent to the English measure but rather is closer in meaning to "the number of years during all or part of which one has been alive." In the case of newborn infants, they have, according to the *swei* measure, already lived for "part" of a year—and therefore their age is *yi swei,* which English translators usually render erroneously as "one year old" instead of "part of one year."

Each language also encourages certain kinds of place names and makes difficult the formation of others. *Golden Gate* is a typical English place name, a noun (*Gate*) modified by an adjective (*Golden*)—but *Gately Gold* is an improbable construction in English and no place is likely to bear such a name. The importance of a language's structure in determining place names was pointed out by the anthropologist Franz Boas when he compared terms used by the Kwakiutl Indians and the Eskimos. The Kwakiutl are a seafaring people of British Columbia, Canada, whose survival is based almost solely on what they can wrest from the Pacific Ocean and the nearby rivers. So it is no wonder that their place names rarely celebrate history or myth but instead describe practical benefits in navigation and food gathering—such as Island at the Foot of the Mountains, Mouth of the River, Having Wind, Place for

Stopping, and so on. The Kwakiutl language makes it easy to form descriptive names because suffixes can be conveniently added to stem words. For example, a Kwakiutl speaker can discriminate among a great number of different kinds of islands—Island at the Point, Island in the Middle, and so on—simply by adding the suffixes for "at the point" and "in the middle" to the stem word for "island."

The nearby Eskimos also base their culture on the sea, and so they might be expected to name places in a similar way. But they do not—because the structure of their language makes it very difficult to do so. What are suffixes in Kwakiutl are in Eskimo the very words to which suffixes are added. Eskimos cannot easily create the name Island at the Point because in their language "at the point" is not a suffix but a stem word to which other words are added. To describe a place as Island at the Point, the Eskimo speaker would have to put together a circumlocution much too complicated for everyday use. Furthermore, the Eskimo language offers its speakers only a limited number of suffixes to attach to stem words, where Kwakiutl offers a great many. The result is that Kwakiutl possesses an extraordinarily rich and poetic catalog of place names—such as Birch Trees at the Mouth of the River and Receptacle of North Wind, names that make one's heart yearn to visit the places they identify—while the Eskimo list is considerably shorter and much less metaphorical. Eskimos do not differ significantly from Kwakiutls in intelligence, the ability to abstract, or other mental capacities. Yet it might appear that the Eskimo is somehow at the mercy of his language, that it has cheated him by making it very difficult for him to name a place Birch Trees at the Mouth of the River or even to talk about the world in the same ways that the Kwakiutl can. And indeed the common-sense observation that language sometimes makes speakers intellectually lazy is a true one. Speakers will categorize new experiences in the well-worn channels they have been used to since birth, even though these channels might appear foolish to an outsider.

The language spoken by the Western Apaches of Arizona, for example, has long had its own channels for classifying the parts of the human body, a system that ignores certain distinctions made in other languages and makes different ones of its own. Then, about 1930, a new cultural item—the automobile—was introduced into the Apache reservation. An automobile, surely, is different from a human body, yet the Apaches promptly applied their existing classification for the human body to the automobile. The following chart gives approximate pronunciations of the Apache words for the parts of the human body, shows the way they are categorized—and the way their meanings were extended to classify that new cultural item, the automobile:

APACHE WORDS
FOR PARTS OF THE HUMAN BODY
AND THE AUTOMOBILE

Human Anatomical Terms		Extended Auto Meanings
EXTERNAL ANATOMY:		
daw	chin and jaw	front bumper
wos	shoulder	front fender
gun	hand and arm	front wheel
kai	thigh and buttocks	rear fender
ze	mouth	gas pipe opening
ke	foot	rear wheel
chun	back	chassis
inda	eye	headlight
FACE:		
chee	nose	hood
ta	forehead	auto top
ENTRAILS:		
tsaws	vein	electrical wiring
zik	liver	battery
pit	stomach	gas tank
chih	intestine	radiator hose
jih	heart	distributor
jisoleh	lung	radiator

But the Western Apaches' convenient system for classifying the human body did not lock them into intellectually lazy ways of talking about the automobile. In fact, the very existence of the Apache's convenient channels for speaking about the parts of the body may have aided them considerably in making sense out of the exotic automobile. The experience of the Western Apaches makes it apparent that language does not completely tyrannize its speakers by forcing them to speak in certain arbitrary ways. Rather, the history of language reveals successful struggle after successful struggle against the limitations built into all language systems. The history of science and technology in European nations is partly a history of attempts by speakers of these languages to find a new way to express the previously inexpressible. And the same successful struggles have been made by the nonindustrialized peoples of the world—whether they be American Indians who encountered the horse and the gun in the possession of Spanish conquistadors or Melanesians of the South Pacific who were suddenly awakened from the Stone Age during World War II.

And so an essential paradox emerges about language. Every human being—regardless of the structure of the language his community speaks, where in the world he lives, his high or low social position—is born to speak, to be infinitely creative in constructing unique sentences. Yet, at the same time that the young speaker is putting together for himself the grammar of his language, he is also learning that his creative efforts must filter through the beliefs, assumptions, and prejudices of his own speech community. By age five, a child can utter a wide repertory of grammatical sentences—but he is still learning which of these sentences to use at any given time and place. *How* and *where* he says something becomes an important part of *what* he says—and no member of a speech community is ever permitted to say whatever he cares to, in any form he wishes to use, on any occasion. These factors—innate creativity within a framework of social conventions—reinforce each other and represent the hallmark of our species, *Homo loquens*, Man the Talker.

Peter Farb has previously written articles for HORIZON *on linguistics and anthropology. This article will appear in a somewhat different form in his book* Word Play: What Happens When People Talk, *to be published in January by Knopf.*

HONI SOIT QVI MAL Y PENSE
The world of
Edmund
Spenser

He was one of the "new men," who rose (and fell) by his wits—his work and life a reflection of the splendors and miseries of his time

The Elizabethans stare from museum walls, strangely contemporary yet remote. We feel we should recognize, in the portraits of such heroes as Raleigh and Drake, the earls of Leicester and Essex, Philip Sidney and Edmund Spenser, the prototypes of modern man, freed from the old patterns and relative simplicities of the Middle Ages and possessed of a sensibility similar to our own. Yet they remain strangers, specimens pickled in time. Despite the frank, confident expression in their eyes, there is an absence of personality: the challenging man-of-action faces, the short hair and trim beards, seem at odds with the peacock display of their bright, ornamented clothes. Although we know them to have been passionate and volatile, they are portrayed with a stiffness and formality close to heraldry. We are left with a sense of heroes emblazoned on canvases, emblems of chivalry rather than individual personalities. The essential mystery of what it felt like to be alive in the middle years of Elizabeth's reign remains unsolved.

Edmund Spenser comes closest to unraveling the mystery behind these public faces, for his masterpiece, *The Faerie Queene*, is a record of a man's mind responding to and being modified by the Elizabethan Age.

At first, the journey through the poem seems daunting. From the first stanza we are in a strange, abstract world. Like the Elizabethans of the portraits, the poet's personality is elusive:

A Gentle Knight was pricking on the plaine,
Y cladd in mightie armes and silver shielde,
Wherein old dints of deepe wounds did
remaine,
His angry steede did chide his foming bitt,
The cruell markes of many 'a bloudy fielde;
Yet armies till that time did he never wielde;
As much disdayning to the curbe to yield:
Full jolly knight he seemed, and fair did sitt,
As one for knightly guists and fierce
encounters fitt.

The knight pricking on the plain quickly vanishes into that golden haze that surrounds the Elizabethan Age. The images that define "England's Glorious Hour" in our schoolbooks are suffused with it: the queen addressing her troops at Tilbury, flame-haired and dazzling, a silver corselet over her white velvet dress; Drake playing bowls on Plymouth Hoe while the Armada sweeps through the channel; Raleigh's absorbent cloak, Hilliard's miniatures, the groundlings' honest laughter at the Globe; Ben Jonson roistering at the Rose; the gardens of Hampton Court with gillyflowers and pinks; the lascivious pleasing of a lute.

Spenser belongs somewhere in this world, but he also belonged to another, darker world: the filth and stench of the London streets and a gang of blind beggars trying to club a pig to death; the constant threat of plague; Bedlam; appalling cruelty—men strung up, cut down still living, castrated and disemboweled; Elizabeth at Kenilworth Park releasing a captured deer, but first cutting off its ears.

Spenser's achievement in *The Faerie Queene* was to embody these great antitheses—both the magnanimity and grace of the age that inspired poets and sent adventurers around the world, and the frantic cruelty that degraded even the most civilized. He managed, beyond that, to resolve both worlds, creating a synthesis that mirrors Elizabeth's achievement in creating the unity of the Elizabethan State. He is the poet of opposites and their reconciliation—and to experience his struggle in reconciling the contradictions of Elizabethan life makes the epic books of *The Faerie Queene* worth reading.

He was probably born in 1552, at Smithfield in East London, a place that was to acquire, three years later, notoriety all over Europe when Queen Mary Tudor began a series of *autos-da-fé* there and burned three hundred Protestants to death. For three years the London crowds flocked to witness the fires, the mounting piles of ash, and the screams of the victims. They saw Archbishop Cranmer burn and, in robes of

By JOHN WOOD

BRITISH MUSEUM; PREVIOUS PAGE: FROM L. WAGENAR, *The Mariners Mirrour*, 1586, BRITISH MUSEUM

London, Spenser's "most kindly Nurse," appears at left in a view done in 1588. When the poet was born about 1552 on the city's outskirts, London had a teeming population of a quarter of a million. The anonymous portrait above shows Spenser as a young man.

suitably fiery magnificence, the prelates and courtiers who had escaped Catholic persecutions of the previous reign.

The fires were slaked in 1558 when Mary died of dropsy and her half-sister Elizabeth came to the throne. "She left no doubting whose daughter she was," said her godson Sir John Harington. She had the "Stately and Magestic deportment" of Henry VIII, and, more important, his intelligence and indomitable will. She had seen the religious persecutions of the last two reigns tear the realm apart; it could not survive another. At her first opening of Parliament, she commanded the members to "eschew contumelious and opprobrious words"—heretic, schismatic, papist—as causes of "displeasure and malice, enemies to concord and unity," the very marks they were now to aim at.

Words, just words. Yet Elizabeth had been educated to respect words and their appeal to what was rational. Roger Ascham, her tutor, had introduced her to the New Learning of the Italian Renaissance, and she had studied such books as Castiglione's *Courtier* in which the medieval split between the active and contemplative life was reconciled. The new ideal was a combination of learning and action, statecraft and poetry, love and war. She looked for this breadth of civility in her ministers—it was not essential that they be of the nobility, as had been the tradition in previous courts, but they must be educated. Her lord chamberlain, William Cecil, himself of yeoman origin, wrote with a certain self-satisfaction in 1559: "the wanton bringing up and ignorance of the nobility forces the Prince to advance new men that can serve." New men. Intelligence and talent were to be the roads to advancement, and they were open to all.

Spenser was of the generation that took advantage of this change in values. His father was a journeyman of the Merchant Taylors' Company and so was entitled to send his nine-year-old son, with the help of a scholarship from the Nowells Bequest, to the newly founded Merchant Taylors' School. Here young Spenser was fortunate to have as headmaster another product of the New Learning. Richard Mulcaster was also immensely patriotic, believing that the purpose of education was to produce gentlemen who could be of service to the state. At the Merchant Taylors' School, English was spoken, not the traditional Latin, for, as Mulcaster wrote: "I love Rome, but London better, I favour Italy, but England more, I honour Latin, but worship English."

It was probably from Mulcaster that Spenser derived his sense of the dignity of his native language, and an ambition to create a literature that would place English on a par with the Italian of Dante. It is also possible that Mulcaster provided the boy from Smithfield with his first glimpse of court. Once a year the pupils of the school presented a play before the queen. If Spenser took part he would have seen the glittering world that, should he have the talent, might one day open to him.

Such an opportunity is familiar now; then it was new. Spenser, a gifted boy from middle-class origins, might find a place in that glittering court circle that stood at the center of English life—and toward that eminence he would be careful to enlist the support of anyone who might be able to help.

In 1569, seventeen-year-old Spenser saw some of his verse translations in print, in Van der Noodt's pious tract, *The Theatre of Voluptuous Worldlings*; in the same year, he entered Pembroke Hall at Cambridge University. He found a friend in Gabriel Harvey, a fellow of the college, and their correspondence after Spenser left the university in 1576 contains repeated references to the need for patronage. Writing for a living was impossible. As Jonson wrote: "Poetry in this latter Age hath proved but a mean Mistress, to such as have wholly addicted themselves to her." Spenser's only chance was to attach himself to a noble household and receive his bed and board in

D. LOGGAN, *Cantabrigia illustrata*, CAMBRIDGE, 1690 (1905 EDITION)

NATIONAL PORTRAIT GALLERY, LONDON

At Cambridge, said Spenser, "adorn'd . . . with many a gentle Muse and many a learned wit," the poet attended Pembroke Hall, above. The friend and inspiration of his youth was the soldier-poet Sir Philip Sidney, right, the embodiment of the Elizabethan idea of the gentleman. The woodcuts opposite illustrate two months of The Shepheardes Calendar, *Spenser's first major poem.*

return for secretarial duties and the dedication of his poems.

He found in Sir Philip Sidney a powerful connection. Aristocrat, soldier, diplomat, and poet, Sidney possessed the combination of accomplishments that was the Elizabethan ideal. He was in no financial position to offer anything in the way of patronage, but he was the great Earl of Leicester's nephew, and Leicester was the queen's favorite. By 1579 Spenser had entered the earl's household; with the publication that same year of his first major work, *The Shepheardes Calendar*, his ambition was realized: the success of this poem secured him acceptance at court and he could now expect preferment and prosperity. He had arrived.

Elizabeth had been on the throne for twenty years. Her policies had, in the main, achieved the unity and accord she had set her heart on. Her court rivaled any in Europe, for she knew that "in pompous circumstances a secret of government doth much consist." The great palaces of Windsor, Hampton Court, and Whitehall housed a shifting population of a thousand or more, from the great dignitaries of state to the grooms and scullery maids. It included ambassadors of the great powers, their spies and counterspies (the Spanish ambassador even employed a spy in the royal laundry to take note of the queen's menstrual periods); there were poets, musicians, merchants seeking monopolies, adventurers, and every kind of hanger-on. At the center was Elizabeth, "the life, the head, and authority of all things that be done in the realm of England." In the great tapestried halls, on the flowering lawns and dark landings of servant stairs, they fought for position. Many, like Spenser, had nothing to fall back on, no family wealth or estates to retire to. To lose the queen's favor, or that of her ministers, was to lose everything. Spenser wrote later:

For sooth to say, it is no sort of life
For shepheard fit to lead in that same place,
Where each one seeks with malice and
with strife,
To thrust downe other into foule disgrace,
Himselfe to raise. . . .

It was not to be his life. Within a year the blow fell. Elizabeth was still unmarried and she kept her virginity interesting by constantly promising to lose it. The latest candidate for the privilege was the French Duc d'Alençon. Spenser wrote a verse fable, *Mother Hubberd's Tale*, satirizing the match. The poem, like all court poems, was circulated in manuscript and came to the attention of Lord Burghley, Elizabeth's lord chamberlain. He took offense, the manuscript was recalled, and Spenser was out in the cold. In August, 1580, he found himself in Ireland.

The Elizabethans must have regarded Ireland in much the same way the Victorians did the Sudan: uncomfortable, dangerous, full of rebellious savages who clung to their detestable religions with fanatical zeal. For the Elizabethans, Irish Catholicism was also strategically perilous, for Spain and Italy saw the island as a stepping stone to an invasion of England.

Spenser found a job as secretary to the newly appointed lord deputy of Ireland. Lord Grey de Wilton was a stern Puritan: the pope was anti-Christ, the Irish were betraying both their God and their queen, and it was his duty as her lord deputy to bring them to heel.

Another rebellion had broken out in Ireland, this one inflamed by the Desmonds, the ancient kings of the southern province of Munster. A small force of Spanish and Italian support troops had landed on the Kerry coast, at a fishing village called Smerwick. Grey, with Spenser at his side, marched there with a large army and forced the foreigners to unconditional surrender. The officers were ransomed, but the rest—six hundred of them—were massacred. When the Desmond rebels ran into the

April—Queen Elizabeth and her ladies visit shepherds:

Tell me, have ye seene her angelick face,
Like Phoebe fayre?
Her heavenly 'haveour, her princely grace,
Can you well compare?

March—a disillusioned shepherd tells of a losing battle with Cupid:

And silver bowe, which was but slacke,
Which lightly he bent at me.
That seeing, I levelde againe,
And shott at him with might and maine.

hills, the pious lord deputy burned their crops and left them to starve. Spenser later wrote of their plight:

> Notwithstanding that Munster was a most rich and plentiful country, full of corn and cattle that you would have thought they should have been able to stand long, yet ere one year-and-a-half they were brought to such wretchedness as that any stony heart would have rewed the same. Out of every corner of the woods and glens they came creeping forth upon their hands, for their legs could not bear them; they looked like anatomies of death; they spoke like ghosts crying out of their graves, and if they found a plot of watercress or shamrocks, there they flocked as to a feast for a time. . . .

Despite the rewing stony heart, Spenser believed that Grey's policy was right. Long after Grey was recalled, Spenser defended him: a government—"they which now are in the light themselves"—should not allow its people "to wallow in such deadly darkness."

So as not to leave them wallowing in their darkness too long, the English armies in Ireland strained to do their duty. They hunted the natives for profit and recreation alike—one detachment sending back a brace of Irish heads "like a bag of game to the Lord Keeper." The wives and children of the Surley Boy rebels in Antrim were massacred on the island of Raithlin—another bag of six hundred—while their leader "stood on the mainland and saw the taking of the island and was like to have run mad for sorrow." It is difficult to imagine a man such as Spenser tolerating such unrelieved severity. And yet he stayed.

In 1588, the year of the Armada, Spenser was granted a perpetual lease of Kilcolman Castle, near Doneraile in County Cork. The estate, three thousand and twenty-eight acres, was a tiny corner of the vast Desmond lands that had been confiscated after the rebellion and carved up for English settlers. Castle is a grand word for a small oblong peel tower with a modest turret at one corner. The largest room, on the second floor, was only sixteen feet square. Its situation was unimpressive, standing in a wooded hollow by a brackish lake. But the chief disadvantage of the place lay in its strategic position. To the northeast were the Ballyhoura Mountains, rising to three thousand feet and scored with deep ravines. It was to this wilderness that the Desmond rebels fled, those "anatomies of death." Surrounded by these "savages" and deprived of the consolation of society (the loyal Irish gentry in the district refused to speak to him), Spenser turned his back on the hills and wrote. He had begun *The Faerie Queene* in 1580, the year he arrived in Ireland.

For the Elizabethans the writing of poetry was never a private indulgence, a matter of putting the best words in the best order. There was always a public purpose. Spenser, sitting alone in his tower at the back of the world, professed to be writing a very ambitious poem. It would be, so he planned, "desposed into XII bookes fashioning XII morall vertues . . . to fashion a gentleman or noble person in vertuous and gentle discipline."

His purpose, then, was to educate. Writing in his own distinctive nine-line-stanza scheme, Spenser tells a tale of "darke conceit" in which Prince Arthur, the future king, goes in search of the Faerie Queene, Elizabeth. In each of the six books completed, Arthur, representing Magnanimity—in Spenser's system, the combination of all moral virtues—meets a knight of the queen's court. Each knight represents a particular moral virtue—Holiness, Temperance, Charity, Friendship, Justice, and Courtesy—and has been set "pricking on the plaine" in search of some allegorical monster to slay. Along the way the knights are attacked and seduced by saracens, witches, giants, wizards, monsters—all representing some spiritual, moral, or political viciousness. In these clashes with the virtuous knights, we hear the impact of those "opposites" I referred to earlier.

There was undoubtedly another pur-

Ireland, during Spenser's stay there, was a land of "desolation and wastness." Although chiefs such as Turlough Lynagh O'Neill, above, submitted to the English lord deputy, Spenser's first duty in Ireland was to help crush the Munster rebels, left. While living at Kilcolman Castle, later put to ruin, opposite, by another rebel band, Spenser prepared The Faerie Queene *for publication.*

pose as well. Spenser must have realized that by writing an English epic poem, dedicated to "That Greatest Glorious Queene of Faerieland/To winne him worshippe and her grace to have/ Which of all earthly things he did most crave," he might eventually regain his place at court.

The poem is more, however, than an extended piece of flattery. Gradually it creates its own world, subject to its own inner laws. Spenser uses *The Faerie Queene* to contain and transmute his experiences and observations, and the bright and dark aspects of his historic present. The allegorical method allows him to include references to actual happenings, as in his description of Duessa, a witch who stands for Deceit, Blasphemy and, by implication, the Roman Catholic Church. Duessa, a beautiful damsel, has been captured; she has almost succeeded in seducing the Red Cross Knight from his quest, but now she is confronted with the Lady Una, who is Truth. Una orders her stripped of her finery, and in this stanza Duessa stands revealed:

Her craftie head was altogether bald,
And, as in hate of honorable eld,
Was overgrowne with scurfe and filthy scald;
Her teeth out of her rotten gummes were feld,
And her sowre breath abhominably smeld;
Her dried dugs, like bladders lacking wind,
Hong downe and filthy matter from them weld;
Her wrizled skin as rough as maple rind,
So scabby was, that would have loathed all womankind.

When Mary, Queen of Scots was executed in 1587 in Fotheringay Castle, she came to the block in a black dress of velvet and satin, her hair in coils and covered by a long veil. She was ordered undressed and knelt at the block in a blood-red silk petticoat. When the axeman had finally succeeded in chopping off her head, he bent to pick it up. The auburn wig came away in his hand, revealing Mary's short-cropped gray hair. By incorporating the incident into his description of Duessa, Spenser not only tied the allegory to a political reality—the witch who for so long was Elizabeth's greatest threat—he also intensified the battle between the dualities of his own world.

Where is the synthesis between these endlessly metamorphosed antitheses? It lies in the whole poem, even in the way that it seems to be going on and on, just as life itself appears to be going on and on. We sense that Spenser was looking for something behind the proliferation of dualities: an order—a Platonic Form, if you like—from which everything in the poem and in the world has derived.

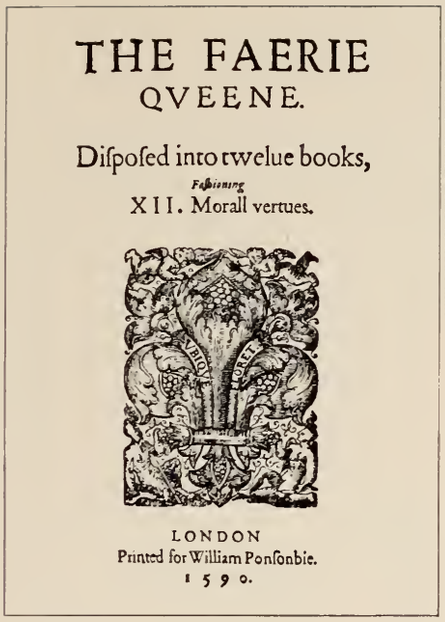
It is this quest—Spenser's own—that transcends the purposes of moral education and political rehabilitation. The form is elusive. Early in the poem it is identified with the Faerie Queene herself. Prince Arthur has had a vision of her in a dream:

When I awoke and found her place devoyd,
And nought but pressed gras where she had lyen,
I sorrowed all so much, as earst I joyd,
And washed all her place with watery eyen.
From that day forth I lov'd that face divine;
From that day forth I cast in careful mind
To seek her out with labour and long tyne . . .

In the last book, the symbol has changed, the vision becoming more abstract. Sir Calidore, Charity, discovers the Graces dancing in the Valley of the Shepheardes:

He durst not enter into th'open greene,
For dread of them unawares to be discryde,
For breaking of their daunce, if he were seene;
But in the covert of the wood did byde,
Beholding all, yet of them unespyde.
There he did see, that pleased much his sight,
That even he him selfe his eyes envyde,
An hundred naked maidens lilly white,
All raunged in a ring and dancing in delight.

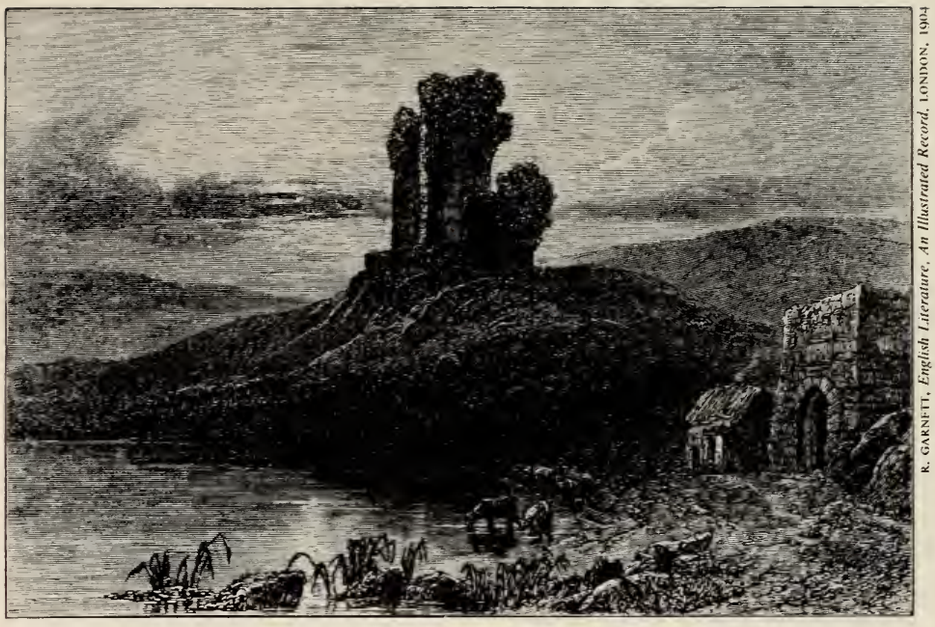
The image belongs to the paintings of Botticelli, but the landscape could only be England (or Ireland), and the Graces


THE FAERIE
QVEENE.

Diſpoſed into twelue books,
Fashioning
XII. Morall vertues.

LONDON
Printed for William Ponſonbie.
1590.

NEW YORK PUBLIC LIBRARY, RARE BOOK ROOM



R. GARNETT, *English Literature, An Illustrated Record*, LONDON, 1904

dance to the piping of a shepherd, Colin Clout—Spenser's poetic name for himself. The Dance, the essential harmony at the center of everything, is also elusive. When Sir Calidore approaches the maidens, they vanish. But Colin Clout has seen them. And they danced for him.

Spenser lived at Kilcolman for ten years, during which time he made two trips to England. The first was at the insistence of Raleigh, who had read the first three books at Kilcolman in 1589. Spenser presented them to his queen and they were published in 1590.

Elizabeth was fifty-seven then, and time had taken away her grace and vitality. In place of Spenser's schoolboy vision of her and the memory of his days at court, there was now only "pressed grass." Like her cousin Mary she wore a wig; her nose was hooked now, her teeth black; in her later years she banished mirrors from all of her palaces. Her clothes were still magnificently beautiful, but instead of them becoming her, Elizabeth was now becoming her uniform.

The nineties were also years of failing harvests and steeply rising inflation and increasingly heavy taxation. The greatest nobles—even the Earl of Essex, the queen's favorite—were driven to desperation by the threat of bankruptcy. Things were falling apart, and they promised to get worse, for Elizabeth's status as an old maid prompted wide fears of civil war over succession to the throne. And yet, oddly enough, it was during this troubled period late in Elizabeth's reign that most of the masterpieces of Elizabethan literature were written. She was only thirteen years from her death when Spenser published the first three books of *The Faerie Queene*: Shakespeare's first popular success, *The Comedy of Errors*, was not produced until 1592: the blissful *Twelfth Night* belongs to 1600, not to Elizabeth's "calm and quiet season."

Perhaps Spenser saw that despite his poem's success and a state pension of fifty pounds a year, the Faerie Queene he had created was more real to him than the elderly woman who sat on the throne. Whatever the reason, he chose to return to Kilcolman. He seems to have been happy. In 1594, at forty-two, he married Elizabeth Boyle and celebrated the wedding by writing his lovely *Epithalamium*. There were children—Sylvanus, Lawrence, and Peregrine—and *The Faerie Queene* went forward. Nor did he neglect the "active life." In 1598 Spenser was appointed sheriff of County Cork, recommended by the Crown as being "endowed with good knowledge and learning and not unskilful or without experience in the wars." He would need it.

In the same year yet another rebellion erupted in Ireland, this time in the north. The rebel earl of Tyrone defeated a large English army in Armagh and marched south. The Desmonds came down from the hills and burned Kilcolman. Spenser escaped with his wife and children, though Ben Jonson reported that a newborn child was burned in the house. The family crossed safely over to London, but Spenser died within months of their arrival, on July 16, 1599.

Only six of the projected twelve books of *The Faerie Queene* had been completed, but it is a mistake to think of the poem as unfinished. Perhaps it always would have been, for the poem was Spenser's world and it could only end with his death. As Yeats, also a Platonist, wrote:

O body swayed to music, O brightening glance,
How can we know the dancer from the dance?

John Wood is an English novelist, satirist, and actor, whose stage name is John Fortune. Following Spenser's example, he studied at Cambridge, and now resides and writes in County Cork, Ireland.

THE GAME OF PATRONAGE

"An Unknown Youth" by Nicholas Hilliard, circa 1588

Sir William Teshe, 1580

"What is gentry if wealth be wanting, but base servile beggary?" asked the poet Robert Greene, a sardonic contemporary of Spenser's. Greene was referring to a fundamental fact of Elizabethan life—that an ambitious young gentleman without inheritance had no choice but to plunge into the feverish scramble for patrons, a hunt with the ultimate prize the favor of the queen. Consulting Castiglione's *The Courtier*, young men would affect the best courtly manner—the graceful nonchalance of Hilliard's gallant, left—spend their meager patrimonies on the latest Italian fashions, and loiter obsequiously about the houses of the mighty in the hope of gaining the notice of a lord or of one of his lesser kinsmen, or, failing that, the eye of his secretary. Without a powerful patron artists and scholars also risked a lifetime of obscurity, an obscurity made doubly bitter by the fact, as Spenser observed, that so many noblemen preferred "Parasites and Sycophants" to the creative. Fulsome dedications necessarily accompanied new works: author Sir William Teshe, above, presenting his book to Elizabeth, "prayes your Grace to take it in good parte." Success so capriciously gained made life radically insecure. As a friend of Sir Philip Sidney, Spenser had won the patronage of Sidney's uncle, the Earl of Leicester, favorite of the queen. Yet, when the poet's affairs seemed to be prospering, Leicester fell from grace. For virtually the rest of Spenser's life he had no powerful friend at court. Little wonder that he devoted some of the finest stanzas of *The Faerie Queene* to the power of "dame Mutabilitie."

"The 'Ermine' Portrait" of Elizabeth, attributed to William Segar, 1585

FAR LEFT: VICTORIA & ALBERT MUSEUM; LEFT: BRITISH MUSEUM; OPPOSITE: BY COURTESY OF THE MARQUESS OF SALISBURY

AN ELIZABETHAN LIFE

Sir Henry Unton was not a great Elizabethan but he was, and did, all the right Elizabethan things. He was indubitably wellborn—his grandfather being a duke—and properly educated at Oxford. He combined literary tastes, which earned him dedications from minor authors, with a soldierly spirit. He fought bravely for his queen in the Low Countries and would have fought a duel for her in France had the Duke of Guise, who had spoken "impudently" of Elizabeth, accepted Unton's challenge. Like any ambitious Elizabethan he was, of necessity, a courtier who parlayed his friendship with the queen's reigning favorite, in this case the Earl of Essex, into an appointment as ambassador to France. When Unton died abroad of a fever in 1596 his widow commissioned an artist to depict him amid the scenes, above, of what had been a totally exemplary Elizabethan life.

Spenser on Weddings, from *The Epithalamion:*

"Harke! how the Minstrils gin to shrill aloud
Their merry Musick that resounds from far,
The pipe, the tabor, and the trembling Croud,
That well agree withouten breach or jar.
But, most of all, the Damzels doe delite
When they their tymbrels smyte,
And thereunto doe daunce and carrol sweet,
That all the sences they doe ravish quite;
The whyles the boyes run up and downe the street,
Crying aloud with strong confusèd noyce,
As if it were one voyce,
Hymen, iö Hymen, Hymen, they do shout. . . ."

NATIONAL PORTRAIT GALLERY, LONDON

Sir Henry Unton by an anonymous artist, circa 1600

On Age:

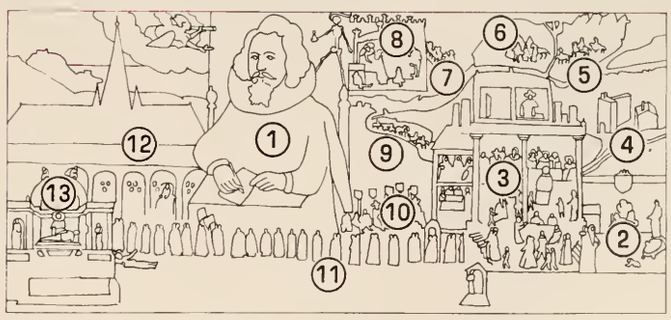
"So passeth, in the passing of a day,
Of mortall life the leafe, the bud, the flowre,
Noe more doth flourish after first decay,
That earst was sought to decke both bed and bowre. . . ."

The Faerie Queene

On Immortality:

"For deeds doe die, how ever noblie donne
And thoughts of men do as themselves decay
But wise wordes, taught in numbers for to runne,
Recorded by the Muses, live for ay. . . ."

The Ruines of Time



1) Sir Henry Unton
2) The infant Henry
3) His wedding feast
4) Oxford days
5) Touring Italy
6) A soldier in the Low Countries
7) A diplomat in France
8) Dying of fever
9) Return of Henry's body
10) His death mourned
11) The funeral procession
12) Burial at Faringdon church
13) Sir Henry's monument

NATIONAL PORTRAIT GALLERY, LONDON

FOR THE LOVE OF A LADY

Robert Devereux, Earl of Essex, 1602

The royal court, wrote a disgruntled Spenser, was a place "Where each one seeks with malice and with strife/To thrust downe other into foule disgrace. . . ." Much of the maneuvering derived from Elizabeth's never-to-be-concluded search for a consort. Robert Dudley, the future Earl of Leicester, right, was the fifth son of a twice-disgraced ducal family when the queen chose him as her platonic love shortly after ascending the throne. At once Dudley became the most powerful politician and patron in the realm. But after years of waiting for the royal heart to soften toward marriage, Leicester secretly married Lettice Knollys, the widowed Countess of Essex, above right. On learning of his defection, Elizabeth flew into a rage and the earl's bright star was tarnished forever. Walter Raleigh, opposite, also ran afoul of royal affections. Spenser's neighbor in Ireland had been an upstart adventurer when his impudent wit and dauntless spirit won the queen's attention. Elizabeth's generosity, in the form of monopolies on wine licenses and broadcloth exports, and the wardenship of the tin industry, made Raleigh wealthy—and hated. When Raleigh contracted a secret marriage with one of the queen's maids of honor, Elizabeth clapped the bridal pair into the Tower of London for several months, thus spoiling a vaulting career. No one, however, rose higher in the royal estimation or fell more disastrously than Lettice Knollys's own son Robert Devereux, the Earl of Essex, above. Pampered by an infatuated, aging monarch and burning with measureless ambition, young Essex in time lost all prudence. He was forever ignoring royal directives, initiating military and diplomatic policies of his own. Denounced as a traitor, the impetuous Essex ended life at age thirty-four on the executioner's block. When Raleigh wrote, "Fain would I climb, yet fear I to fall," he had the alluring perils of court in mind.

BY COURTESY OF THE MARQUESS OF BATH; LEFT: RADIO TIMES HULTON PICTURE LIBRARY

Lettice Knollys, Countess of Leicester, circa 1585

NATIONAL PORTRAIT GALLERY, LONDON

Robert Dudley, Earl of Leicester, date unknown

Sir Walter Raleigh and his son Wat, 1602

THE FAERIE QUEENE

BRITISH MUSEUM

Elizabeth at a deer hunt, a 1575 woodcut

"Some call her Pandora, some Gloriana, some Cynthia, some Belphoebe, some Astraea—all by several names to express several loves. Yet all those names make but one celestial body . . ." rhapsodized one of Elizabeth's subjects. Indeed, Englishmen in the full flush of national optimism erected a cult in the person of their queen, surrounding her with rituals of adulation. Embodiment of all the graces, symbol of England's majesty, image of chastity, spirit of the hunt, daughter of the gods, and guardian of justice were but a few of her celebrated attributes. She was also the "Fair Oriana"—a reference, in the rhetoric of the day, to the maiden in the castle to whom her subjects gladly played knights errant. In this Faerie Land the court was a sort of national stage for the promotion of the cult. As backdrop were the solemn pageants and ceremonials, including the queen's constant and logistically challenging processions from palace to entertainment to hunt. (As shown on these pages, she was never without a huge entourage.) There was the queen's daily dinner, as formalized as a High Mass and as sumptuous as an Olympian feast. There was the yearly revival of the medieval joust to celebrate Elizabeth's Accession Day and to underscore her links to the Age of Chivalry. In the foreground was Elizabeth herself, carrying out a lifelong flirtation with her courtiers, her subjects, and rival heads of state. For a time England thrived under the beneficent if egotistical rule of their Gloriana, but the public confidence and vitality that marked the early years of Elizabeth's reign began to go stale. The jeweled spangles, the fabulous gowns, were as gorgeous as ever; but the gaudy painting, "not only all over her face but her very neck and breast also . . . in some places near half an inch thick," could not spare the dream from the assaults of reality. Ironically, it was Edmund Spenser, fallen from favor and exiled in Ireland, who was to sustain for all times the poetic concept of a tarnished, ultimately mortal monarch as the Faerie Queene.

BY PERMISSION OF SIMON WINGFIELD DIGBY

Procession of Queen Elizabeth, painted circa 1600 by an anonymous artist

VACATION HINTS:

Where to Go in Case of a Reign of Terror

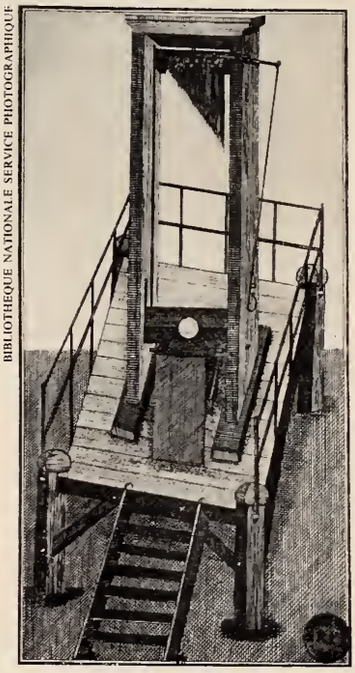
In 1793 France's smart set checked into a "hospital" on the rue de Charonne, where—for a mere $5,000 a month—they could drink champagne, play cards, and discuss the current theatre

A visitor searching today's Paris for the *monuments historiques* of the French Revolution is likely to return home disappointed. Gone is the hotel where Charlotte Corday spent the night before she murdered Marat, gone to all intents and purposes Robespierre's lodgings on the rue Saint-Honoré, gone the Jacobin Club and the Temple Tower. Even the palace of the Tuileries, the rallying point of so much disturbance, has vanished forever. The French, who have raised anecdotal history, *la petite histoire,* to a level approaching art, have been notably unsentimental about preserving the monuments that are so integral a part of that history.

On the rue de Charonne, at the far edge of the unvisited Eleventh Arrondissement, one more irreplaceable relic of the Revolution has recently been demolished. Its disappearance is particularly to be regretted, for its walls were witness to one of the strangest stories in the repertory of revolutionary anecdote.

In the opening days of the Revolution the building at 70 rue de Charonne housed a small insane asylum owned and administered by one Dr. Jacques Belhomme. Belhomme's institution should not be confused with the madhouse of similar address at Charenton where the Marquis de Sade spent his declining years and which was the inspiration for the play *Marat/Sade.* In its own fashion the Maison Belhomme might have offered the dramatist almost as macabre a setting. But to understand the significance of what Belhomme's insane asylum was to become during the Reign of Terror, one must first have some picture of the Terror itself.

Until the autumn of 1793, despite more than three years of revolution, the day-by-day life of Paris had continued in a more or less normal course. The acrimonious political disputes that raged within the Convention and the Assembly did not really disturb the average citizen. For most people the principal effect of the Revolution was food shortage—but this had always been a problem in Paris and three years of revolution and the dethronement of the king had not ameliorated matters. Still, despite severe controls, the price of food continued to rise. By 1792 it had become frightening, and hunger or the fear of it undoubtedly added fuel to the rioting and uprisings that rocked Paris between 1789 and the autumn of 1793.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"La véritable guillotine"—*that great equalizer—was first put to use in Paris on August 21, 1792.*

When one reads today of the massacre on the Champ de Mars, of the September massacres, of the June 20 assault on the Tuileries, or of the historic August 10 attack on that palace, one might wonder how life in Paris during those days could be described as continuing on its normal course. One must try to put oneself back in the city as it was in 1790. It should be remembered that the wide boulevards that cut through today's city did not then exist. In its general appearance Paris of the Revolution was still a medieval city, a conglomeration of crooked streets and fetid, cobbled alleys, many of which—like a maze—led nowhere. In 1790, for reasons of administrative convenience, the city had been split into forty-eight wards called sections, but this in no way affected the character of the age-old parishes into which Paris had been divided centuries before. These parishes, whose beginnings can be traced to the establishment of the medieval guilds, were each so distinct in flavor as to form a series of self-sufficient little towns within the larger community of Paris itself. The Cordeliers Quarter, for example, was the home of printers, journalists, and actors. Les Halles was the central marketplace and the residence of those whose occupation was the distribution of food. For centuries the Saint-Antoine Quarter had been the roost of cabinetmakers and artisans, while the Saint-Marcel district was that of weavers and dyers. One was baptized and married, one lived and died within the same parish. It is among the curiosities of modern Paris that in the older parts of the city some of this flavor still lingers. Even today, the Marais remains a very different community from the Faubourg Saint-Germain.

By STANLEY LOOMIS

In the early days of the Revolution, the principal effect of this parochialism was that one part of the city did not always know what the others were doing. News traveled from quarter to quarter by word of mouth and was often long in reaching some of the more remote parts of the city. Thus it was that the historic upheavals described in latter-day books about the Revolution did not come to the immediate attention of a large part of Paris's citizenry. Those who were followers of Marat, or members of Danton's Cordeliers Club, or had a taste for mass gatherings, could join the fray in front of the Tuileries, but the rest of the populace remained ignorant of the disturbance or refused to see what it did not wish to see.

Early in 1793, however, the atmosphere of Paris suddenly changed and the Revolution entered that phase known as the Reign of Terror. Historians have offered differing opinions about the origin and nature of the Terror. It has been studied from many points of view and examined by a variety of methods ranging from the psychological to the political. What has been largely ignored is the point of view of the ordinary Parisians of the time, people who were not of the prescribed nobility, not part of the mob, not engaged in the factional battles of the Convention. Most of them were ignorant of the various factors that we today, in the detachment of the archives or the safety of the classroom, have learned were instrumental in the making of the Terror.

The Parisian of 1793-94 saw only two of these elements, but those two he must have seen very clearly. The first was the Revolutionary Tribunal, whose sentence with few exceptions was death. The second was the terrible Law of Suspects enacted on September 17, 1793, which fed the Tribunal its victims. Suspects, who could be arrested, imprisoned, and brought to trial at any moment, were defined as follows: "Those who by their behavior, their associations, their conversation or their writings have shown themselves to be . . . enemies of Liberty. Those who are unable to explain their means of livelihood or who have not acquitted themselves properly in the discharge of their civic duties. . . ." And finally, "Those who have been unable to obtain a Certificate of Good Citizenship."

It was the last article on this list that struck at the ordinary people of Paris, for to obtain a Certificate of Good Citizenship one had to appear before the Vigilance Committee of one's local section and make application for this paper whose possession could mean life or death. Undoubtedly many section leaders were honest, good men, prototypes of the austere and incorruptible patriots envisioned by Robespierre in the distant sanctum of the Committee of Public Safety. Others were of weaker clay. The historian Taine is perhaps too severe when he states that "the Vigilance Committees of the local Sections were composed of subordinates full of hatred and envy. The men who sat on them trafficked in Certificates of Good Citizenship. People paid their Section leaders not to be included in the list of suspects or they paid them to have their records mislaid. . . ."

Every description of the day indicates that what made these local Vigilance Committees particularly odious was the power their members had to score off old rancors. Neighborhood enmities—including street squabbles between women—were undoubtedly at the origin of many arrests effected by the section leaders. When one realizes that these arrests were equivalent to death, one can then understand why this phase of the Revolution has been called the Reign of Terror.

The executions were few at first, but in November they began to increase at a startling rate. At the end of October, twenty-one leaders of the Girondin party were guillotined. From then on, two and even three tumbrils were required to cart the daily batch of condemned from the Conciergerie to the guillotine on the Place de la Révolution —today's Place de la Concorde.

In the Popincourt Section of Paris, formerly part of the parish of Saint-Antoine, Belhomme had always been a popular figure. Like many professional men of that day, he was also an enthusiastic partisan of the "new ideas" and was known in his quarter to be a good, solid patriot. It was therefore only natural that he should have been given a position of responsibility on his local committee. And in this capacity, some time during the summer of 1793, he had the inspired idea of turning his insane asylum into a prison. Even before the Law of Suspects the jails of Paris were filled to overflowing. The authorities had been obliged to find new places of incarceration for suspects awaiting trial, and former palaces such as the Luxembourg or abbeys such as Saint-Germain-des-Prés had already been converted into prisons. Dr. Belhomme's asylum would not only answer a civic need. It would answer, as Belhomme saw it, a rather special need. For his prison was not to be quite like the others. As a man of medicine and a humanitarian, he proposed that his institution be put at the disposal of those who were too sick or infirm to be brought to immediate trial.

Today's reader may find it odd that in the midst of the French Revolution special consideration might be given to anyone, even the sick. But the Reign of Terror is, in fact, filled with such incongruities. Even the poor creatures at the Conciergerie were able, if they could pay for it, to rent a less verminous mattress on which to spend their last few nights of life. Not far from the gates of the Conciergerie there was even a catering service and one could send out for a bottle of champagne and the wing of a chicken. At the Luxembourg one or two dowagers were still attended by their faithful maids.

It was in this spirit that Belhomme's prison was conceived. Obviously, with limited accommodations there could not be room for *all* the sick and infirm in the prisons of Paris. Obviously the line would have to be drawn somewhere. Revolution or no revolution, the re-

alities of the world went on: the larks don't fall from the skies already roasted.... In short, Dr. Belhomme's clients would be expected to pay their board and keep. And pay they did. The initial fee, once one had established contact with those empowered to make the negotiations, could be as high as six thousand livres or approximately ten thousand dollars of today's currency. Upon payment of this sum, one was pronounced too "sick" to stand trial, transferred out of whatever disagreeable prison one happened to be in, and committed to Jacques Belhomme's remarkable *maison de santé.*

The contrast between Belhomme's so-called jail and the other prisons of the city, most of them little better than dungeons, must have made the amenities of the doctor's establishment seem even more delightful. Here, between courtyard and garden in a tranquil setting that belonged more to the country than to a city in the grip of terror, one could still enjoy some of the vanished pleasures that constituted the famous *douceur de vivre* of the eighteenth century. A vast, walled park with a garden and an orchard of fruit trees invited one to stroll of a morning. In the evening Dr. Belhomme's "patients" would gather in the principal salon for cards, conversation, and music. Visitors from the outer world were not only permitted but encouraged. Every evening a long line of carriages waited in front of the gates, and the sound of laughter and music drifted into the street until the early morning hours.

The food was perhaps not all that an epicure might desire, but an arrangement rather like the Verandah Grill on the old *Queen Mary* permitted Belhomme's more affluent pensioners to dine at a table separate from fellow guests. Here, for a supplementary sum, one could order from a different menu —à la carte as it were.

Although officially a prison, guards and bars were not needed at 70 rue de Charonne. Confinement to Dr. Belhomme's asylum assured one of something far more important than comfortable living in uncomfortable times. Somehow the accusations made against Belhomme's prisoners became mysteriously misplaced by intermediaries in the busy offices of the public prosecutor, Fouquier-Tinville. No inmate in Dr. Belhomme's custody was ever brought up for trial. Thus it was not pleasant quarters or dainty food or music and laughter that one bought from Dr. Belhomme. It was life itself.

As the guillotine began to go about its work in earnest, as the number of the condemned rose from ten to twenty and even thirty a day, as the arrests increased and the Terror progressed, Belhomme's business flourished proportionately. Clients poured in from all the prisons of Paris and from all walks of life. The insane (there remained a few of these whom he could hardly put out into the street) were packed off to rooms in the attic to make way for more lucrative pensioners. A house next door, the Hôtel Chabanais, was taken on long lease and hastily refurbished. The Duchesse d'Orléans, widow of the guillotined Philippe Egalité and at one time the richest heiress in France, arrived. There was a Talleyrand, a Nicolaï, and the Comte de Saint-Aulaire, from whose memoirs have come many of the details about the everyday life in this curious prison.

The clientele was by no means limited to the former nobility. The widow of the revolutionary Pétion found shelter on the rue de Charonne, as did the deputy Rouzet. The theatre was represented by Mlle Mézeray and also by the most beautiful actress of the day, Mlle Lange. Literature arrived in the person of the Comte de Volney, author of *The Ruin and Fall of Empires.*

It was an oddly assorted group that found itself tossed together under Belhomme's roof. This seems to have lent the place an additional interest, for a number of unexpected friendships were made there. The Duchesse d'Orléans and the deputy Rouzet formed an attachment that was to last the rest of their lives. After the Terror ended and Belhomme's prisoners were dispersed, Rouzet joined his friend in exile, remaining with her even when, under the Bourbon Restoration, the Duchesse regained her rank of Princess of the Blood. When he died she insisted that he be interred in the royal crypt at Dreux so that even in death they would not be parted from each other.

Only one cloud cast a shadow over this happy little haven that seemed so far from the storms lashing the outer world; but it must have brought a singularly disagreeable chill into the sociabilities of the salon. This was the small matter of one's monthly bill. For the fees were by no means over when one had paid the initial ten thousand dollars. There was one's board and keep as well. As with any well-regulated hotel, the price varied according to the accommodation. Small back rooms, rooms sparsely furnished and shared with several others, could be had for as little as four hundred livres a month. There was a long waiting list for these. For average or better accommodations, the rate was substantially higher. Nor was the end in sight when one had paid the rent. There were other charges too: forced contributions to neighborhood patriotic funds, tips to the concierge, exactions for wine and various services. All in all, one could count on paying something in the neighborhood of five thousand dollars a month.

In the midst of a revolution in which all usual sources of income had been cut off, such a sum as this was not readily come by. The rich who had lived off rents and revenue from their lands were now destitute. The nobility whose positions automatically meant the confiscation of their pensions and property were penniless. Survivors of proscribed or executed spouses, such as the Widow Pétion or the Duchesse d'Orléans, were without means since anything owned by the condemned was immediately taken by the state. Only those who had friends in the outer world, those who had wisely hidden a pile of gold or managed to conceal small negotiable objects of value such as snuffboxes or jewelry on

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GIRAUDON

A revolutionary executioner, above, displays the severed head of the Duc d'Orléans—Philippe Egalité—a left-wing aristocrat whose death was ordered largely for its shock value. The Duchesse, left, a princess of the blood royal, saved her own life by becoming the star "patient" in Dr. Belhomme's asylum along with other fugitives from the Reign of Terror who could afford the doctor's "fees."

their persons, were able to meet Dr. Belhomme's monthly exactions. The fate of those who came to the end of their resources or whose family and friends refused to make further payment was well known. They were sent back to a public prison, brought up for trial, and finally guillotined.

According to every report, Dr. Belhomme was an amiable man. All who later recalled him were to speak of his good humor. In the privacy of his office, where those who couldn't pay their bill were summoned, he managed the unpleasant business of expelling an indigent pensioner with such affability, with such good sense, that nearly everyone parted on the best of terms. No doubt he would explain, albeit discreetly, that he had heavy expenses of his own, that the security he was able to offer had itself to be paid for, that there were certain people in high places.... One would generally be given a few days grace and then, if the required amount of money were not forthcoming, the axe, quite literally, would fall.

The fate of the Duchesse de Châtelet was a salutary example to other boarders who might think Belhomme's prices were beyond their means. The Duchesse, after claiming that she was unable to scrape up further money, was summoned to the director's office and heartily advised that this was not a time to pinch pennies. Belhomme gave the Duchesse a few days in which to reconsider her assets, but to no avail. She was sent back to prison and within a short time brought before the Revolutionary Tribunal and guillotined. Belhomme was as distressed by the news as the Duchesse's friends were. "The lady fell victim to her misplaced thrift," he declared.

One is left to imagine the sensations of those who were themselves running out of money. Evening gatherings over bezique and the clavecin may not have been quite so carefree as they appeared. Nor can the disconcerting presence of the insane, who were continually drifting down from the attic, have contributed much to the general gaiety. A demented old priest of rather wild appearance seemed to get on people's nerves particularly.

Though fear of arousing criticism in the neighborhood prevented Dr. Belhomme from disembarrassing himself of these unwanted guests, he refused to take in any more nonpaying tenants. When the Popincourt Section billeted two local paupers on him, however, there was little he could do. But he treated them so poorly, shunting them off to the attic, feeding them no more than a crust or two of bread a day, that they complained to the authorities. Their complaint was followed by an open denunciation, and in April of 1794 a warrant was issued for Belhomme's arrest. He was obliged to flee his own asylum and take refuge in a competing establishment on the nearby rue de Picpus. He did not long enjoy the mysterious immunity he had been able to give others. He was brought up for trial and sentenced to six years in irons. The lightness of the sentence contributes to the conjecture that he enjoyed protection in high places.

Before running away to the rue de Picpus, Belhomme turned the business on the rue de Charonne over to his wife. Incredibly, she continued to manage it on the same terms until the overthrow of Robespierre's Committe of Public Safety on 9 Thermidor. With the end of the Terror there was no further need of Belhomme's hospital as a prison of a special sort. It reverted to its former use. The insane returned to their old rooms; new patients appeared. Belhomme was released in 1798 and resumed control of his institution. He died there in 1824 at the age of eighty-seven. The business passed to his son and from his son to another alienist, a Dr. Archambeau. It stood until 1970, still an asylum. Its sagging carriage portal, its spacious courtyard, and its vast, neglected park lent it an air of charming, rather reproachful melancholy.

A large apartment building of unimaginative design, whose occupants need fear no ghosts, has been built in its place. Little now remains even of the park where the deputy Rouzet and the Duchesse d'Orléans once strolled. The place may lack charm, but today's tenants can comfort themselves with one reflection: despite 175 years of rising prices their rent will be substantially cheaper than it would have been during the Reign of Terror.

The late Stanley Loomis was a well-known writer on eighteenth-century French history. His books include Du Barry, Paris in the Terror, *and* The Fatal Friendship.

"We Are Happy with Things as They Are"

How a hard life turns out to be easy, and how a primitive society turns out to be sophisticated

SCULPTURES: LESTER WUNDERMAN COLLECTION

Home for the Dogon villagers is a grim escarpment, left, jutting up in Mali in the western Sudan. The wood carving above is the Primordial Couple, the Adam and Eve of the Dogon's intricate mythology.

By SANCHE DE GRAMONT

PHOTOGRAPHED BY ELIOT ELISOFON

This girl has a traditional Dogon coif—see page 93 for her double.

In the West African country of Mali, inland from the great bend of the river Niger, there is a tribe living in conditions of such poverty as to seem hopelessly primitive and backward. A people with a lower level of technology would be hard to find. They have not advanced beyond the calabash to collect water or the hoe to work the land. They call themselves Dogon, a word they also use for the wild grass no drought can keep from growing. Their very name expresses the will to survive in the face of difficult and trying conditions.

And yet the Dogon are a living illustration of French ethnologist Claude Lévi-Strauss's proposition that there are no superior societies. For on closer examination, the Dogon have been found to have a highly developed and complex social organization and a rich and coherent metaphysical system; their version of the world's creation, for instance, has points in common with the biblical account of Genesis.

Within the context of their unpromising circumstances, they have constructed a coherent explanation of the universe, of nature, and of the human condition. In Dogon society, murder, crime, and suicide are practically unknown. Avarice and alienation are also unknown, thanks to the individual's total immersion in the group.

The Dogon eat millet and live in mud huts, but they are convinced their way of life is best, and they see themselves as happy. As one of them told a visitor: "The white men think too much and they do a great many things, and the more they do the more they think. And then they make a lot of money and they worry about losing it. And they are never quiet. And they are never happy. Here everyone is happy. We are happy with things as they are."

When I first saw the Dogon villages, built on steep rocky slopes in the crevices of high sandstone cliffs, I was reminded of Hemingway's short story about the leopard found frozen in the snowy elevation of Mount Kilimanjaro. The Dogon are frozen in time; they resist change because they are isolated and have a strong collective will to maintain their customs and institutions.

They apparently settled in the Bandiagara cliffs between the tenth and thirteenth centuries, in flight from Moslem invaders. According to their oral history, they came from the ancient kingdom of Mande, in what is today western Mali, and were probably freed serfs. To them, the one hundred-mile-long, crescent-shaped russet cliffs that run parallel to the Niger meant safety from pursuing horsemen. They built their villages on the rock, so as not to waste arable land. And there they remained, sheltered from warring tribes in the plain, until the French arrived in 1893 and pacified the area.

Whenever they could they settled near water, but water is scarce in the cliffs, and today one can still see a Dogon woman walking several miles to fill a single calabash. Their lives are determined by the landscape, the climate (four months of rain and a long dry season), and the march of the seasons. Except for two castes of artisans, the cobblers and the blacksmiths, all the Dogon, both men and women, work the land. In June and July they sow millet, in August they sow rice, in September they harvest rice, in October they harvest millet, in November they plant onions, in December they harvest onions, in March they repair their houses, and in April and May they clear their fields. A field may be a fifteen-square-foot patch of earth between the rocks or a narrow promontory that can be reached only by ladder or tiny terraces held up by rock embankments. The plow is useless in this terrain, and the Dogon's primary agricultural tool remains to this day the hoe.

Although a proper census has never been taken, there are estimated to be about a quarter of a million Dogon clustered in villages around the Bandiagara cliffs. Typically, they are short and wiry, with round heads and short, nappy hair. The women, working wives in the fullest sense, since they till the fields with babies on their backs as well as manage their homes, age fast.

In Dogon country, a rich man is one who owns a horse or two cows. The accumulation of wealth is unknown to them. They have no conception of profit. Whatever they can keep beyond their immediate needs is unexpected, like a gift. The barter crop is onions, which they exchange with Peulh shepherds or Bozo fishermen for sheep and dried fish, or sell to wholesalers from the river port of Mopti sixty miles away.

Isolated though they are, the Dogon have established a market economy based on exchange. In large villages,

the market held every five days performs a vital economic and social role. It breaks the monotony of a hard life, allows the Dogon to buy what they cannot produce themselves, like sugar and salt, and provides both a forum for meeting people of other villages and a place for young men to court unmarried girls. Dogon markets have a distinctive smell, a combination of meat that's been in the sun too long, of caldrons bubbling with millet beer, of smoked fish, rancid butter, indigo dye, red peppers, green onions, and sweat shining on hundreds of black bodies.

There are certain Dogon villages that one reaches by climbing down a crevice in the cliff no wider than five feet, over round boulders made smooth and slippery by centuries of bare feet, down a succession of Dogon ladders made not with rungs but from one carved and incised tree trunk (to see the sure-footed Dogon women negotiate these ladders as they come home from market with babies on their backs and baskets of produce balanced on their heads is one of the wonders of West Africa). Suddenly the landscape opens, and a broad plain covered with yellow grass and stunted trees, like the trees in a Japanese garden, stretches below the cliff. The village rises from fallen rocks at the base of the cliff, its houses at first barely distinguishable from the boulders, on a slope so steep that the terraced roof of one house is the only means of access to the house next to it.

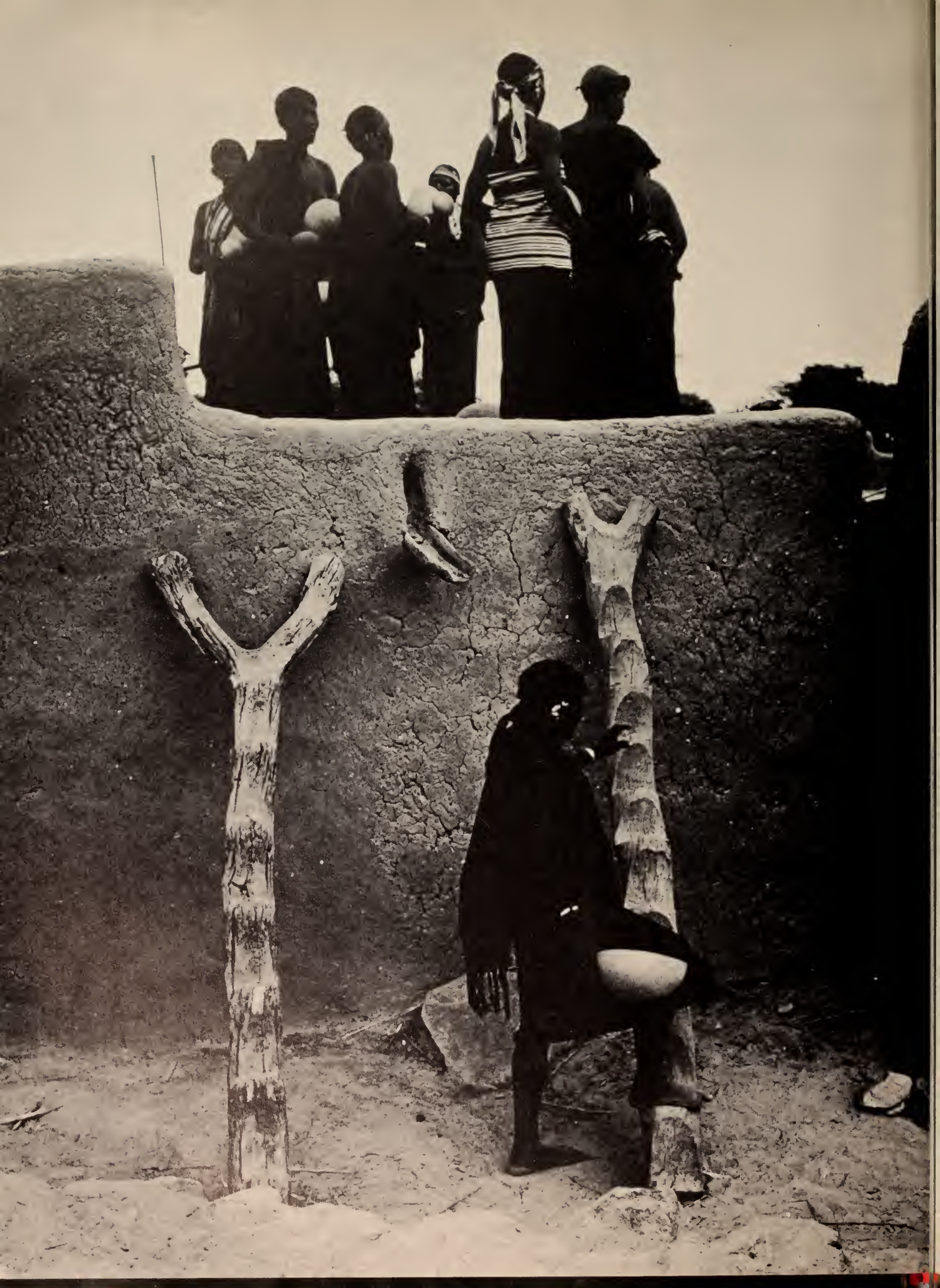
The typical Dogon village is a tangle of clay huts surrounded by granaries and outbuildings, extending from north to south, with the smithy on the north side, the round, womblike houses for menstruating women on the east and west, the communal altars to the south, and large family houses in the center. The granaries are tall and narrow with four sides, carved doors, and pointed thatch roofs. The men's shelter, or palaver house, is made of logs, open on all four sides, with a low roof of woven millet stalks. The houses are built close together and are often surrounded by walls, which give some Dogon villages an air of proud and inaccessible majesty that is reminiscent of Tuscan cities like San Gimignano.

This Dogon father's pharaonic beard marks him as a village leader.

Land ownership is unrestrictive. Whoever works a field is considered its owner. A Dogon house can fall into ruin but will never be sold. It is inseparable from the family that lives in it. This sense of belonging is the key to Dogon society. The individual is defined as a member of the group: he fits into the pattern of society the way a strand fits into the weave of a basket. The Dogon has no sense of personal destiny, but he does have a highly developed sense of integration in an inflexible and all-pervasive social system. The most trivial act, whether it is hoeing onions or weaving a blanket, is carried out according to a set of rules that is intended to reinforce his sense of belonging to the group.

Dogon society is organized along fairly simple patriarchal lines. Age is equated with wisdom, and every group of villages has its Hogon, a respected old man who is at the same time priest and chief. The Hogon depends on little more than personal prestige to enforce his authority. He is responsible for judging infractions of the Dogon code and for keeping the peace on market days. The gravest punishment he can inflict is to expel someone from the community, a girl guilty of incest, for instance, or an incorrigible thief. In the old days, the Hogon held trials in the courtyard of his house, and suspects were forced to swear, "If I lie may God kill me." Religious feelings were strong enough to make perjury rare. Now that Mali is an independent nation, however, the Hogon simply turns over criminal suspects to the federal authorities.

Women are excluded from public life. They are not allowed to participate in councils and cannot enter the palaver house. A wife is said to belong to her husband's family. Ideally the Dogon man wants two wives, but there are never enough women to go around. A woman, moreover, cannot be forced into marriage and, once married, cannot be made to remain with her husband. A Dogon proverb says: "A bee kept in a basket will give no honey." A man who has been left finds it hard to marry again: the women whisper that there must be something wrong with him. A husband can also divorce his wife by sending her back to her parents, but often, even if he has been provoked, he regrets it and recalls the proverb: "When a madman seizes the belt of your trousers, it is better to squat with him." He may ask her to come back, and, if she does, there is a little purification ceremony: the wife's nephew on



her mother's side rubs her with an egg, a turtle is sacrificed, and prayers are said. If she refuses to return, she will probably become the second wife of another man. Women also have a measure of financial independence. Whatever they can make and grow on their own they can sell in the marketplace, and their husbands have no right to the money.

In Dogon society, menstruation is understood as the expression of woman's fundamental impurity. For five days each month, women must leave their families and live in a special house at the edge of the village. The Dogon man's attitude toward women is highly ambivalent, a mixture of contempt because she is impure and respect because she assures the survival of the group. The Dogon seem unable to resolve the contradiction between woman the tainted being and woman the object of man's continuous quest.

Until he can walk, the Dogon baby is in constant physical contact with his mother. During the day, she carries him, his belly against her back, his head on her shoulder. At night, she sleeps with the baby next to her. Dogon babies are breast-fed for two or three years according to a system of free demand. One of the results of constant closeness and unscheduled meals is that Dogon babies rarely cry.

For a boy growing up, circumcision marks the end of childhood and takes place between the ages of eight and twelve. The boy's foreskin is tied with a string, drawn over a chopping block, and severed with one cut of the knife. The boys then spend four weeks in a cave while their wound heals. When they emerge, they walk through the villages clicking castanets made from dried pot-iron bark and singing songs.

Another expression of social integration consists of the lengthy salutations the Dogon exchange whenever they meet. Two Dogon cross on a path and a long dialogue begins, spoken very fast and solemnly, like a recited litany, and ending with a long "Aah" that expresses genuine relief, for now the real conversation can begin. This long, formal greeting, inquiring into the health of a large number of relatives, is an important social act. It is a way of confirming that both men belong to Dogon society, and of recalling the place each one holds in the hierarchy, based on age and family position. It is an exchange in which each gives the other as much as he has been given. It is a way of avoiding quarrels, for it would be unseemly to follow such a formal courtesy with arguments. And finally, the repeated affirmation that "all is well" is an oblique way of asking God to keep it so.

In 1960, three Swiss psychoanalysts, seeking an African tribe that had maintained the way of life of its ancestors and been studied previously by ethnologists, came to the Dogon country. They subjected thirteen tribesmen to analysis and gave Rorschach tests to one hundred others. The three analysts, Paul Parin, Fritz Morgenthaler, and Goldy Parin-Mathey, published their results in 1966 in a book called *Les Blancs Pensent Trop.* They argued that the application of psychoanalytical techniques to African tribesmen was valid because their psychic processes were not radically different from those of Europeans. They gave the Dogon small sums of money to submit to their questions. It may have been the first time in the history of psychoanalysis that the analyst paid the patient.

The word spread among the Dogon that some strange white men wanted to know them, but "with their ears." The Swiss team explained: "In our country, we heal people who feel sick because they are unhappy. We have tried to understand what makes them unhappy when they could be happy." And so, he continued, "We have come to the Dogon to see how it is with them."

"I see," replied a young French-speaking Dogon. "You come and see we are all happy and then you go home and tell about it. But why do you do that? Just for fun?"

"No," he said. "To try and better understand men."

"So you want to know how the soul of a Dogon is made? You will gain nothing by it."

"You are right. We will gain nothing by it."

"What you are doing is like what we do when we fire our guns in the air for the feast of the dead. Powder is expensive. And we fire in the air for nothing, for the heart. To amuse ourselves, but also in a deeper sense."

The Swiss team found that the Dogon they tested were well adjusted, with a strong sense of identification with the group and an equally strong conviction that their way of life was best. They found an absence of libidinal frustrations, which they traced to the child's body-contact with its mother. The Dogon had never heard of homosexuality. When the elders were told about it, they said: "It sounds like a good idea, it would keep young men from being distracted from their work by dreams of women."

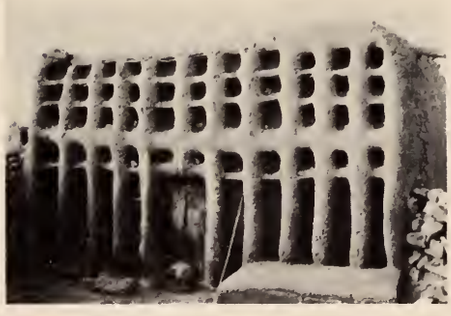
Examples of aggressive or antisocial behavior were rare. The feeling of shame before the judgment of the group is sufficiently strong to make the Dogon obey the regulations of his society. The Dogon would rather adapt himself to the possibilities that the society offers for personal satisfaction than see his

The man above is teaching his son one of the skills necessary for his initiation into the Dogon's male-dominated society: how to make a kanaga *mask, to be worn during funerals as a shield against the life-force of the deceased.* OVERLEAF: *Dancers from the village of Bongo, most of them adorned with cowry shells and dressed in raffia skirts, pose for a group portrait. The double-barred cross is the distinguishing feature of the* kanaga *mask.*

Dogon women, excluded from participation in public funeral dances, assemble on the roof of a mud house, opposite, to perform their own ritual for the dead. The ladders, each carved from a tree trunk, are marvels of functional design.

Granary shutter

Fetish house



Home of a village elder

Art for its own sake is inconceivable to the Dogon, whose handiwork invariably serves ritual, magical, and social purposes. Their superb wooden statuettes, such as the androgynous priest on horseback at right, and the similarly bisexual ancestor figure opposite, are not even meant to be seen. They are hidden away in fetish houses—or sanctuaries—middle, where they magically secure the safety of society. The carvings on the granary shutter, top, affirm the historic origins of this society; the forty-four figures represent the several tribes, including the Dogon, that descend from a more ancient people known as the Mande. The latticework of sun-dried mud, bottom, differentiates the house of a village leader from the flat-walled huts of the others.

place in that society threatened. The three analysts asked if there were ever any murders in Dogon society. Murder —no, that's not sensible, they were told. You have to repair the loss to the family, you have to be on your guard against vengeance, you might be expelled from the group.

Despite the harshness of their surroundings, the Dogon saw themselves as happy. They did not question their dependence on the group. The Swiss team was struck by "the atmosphere of joyous emulation in which most of their social obligations are accomplished, whether they are harvesting millet, cultivating the field of a father-in-law, or celebrating the lifting of a period of mourning."

They concluded: "The Dogon who took part in our conversations are neither childish nor primitive. They are more exposed to external dangers than Westerners, but they feel less anguish. They are more dependent on their surroundings, but they are less solitary. They are less pursued by interior conflicts and they get along better with their fellow men than we do with ours."

Ethnologists were initially drawn to the Dogon because of the fixed, unchanging quality of their life and because they formed a homogeneous, sedentary group. The French ethnologist Marcel Griaule made his first field trip to Dogon country in 1931. As Griaule and his assistants came to know the Dogon during their annual visits, they began to discern that this apparently backward, wretched group of people, remote from centers of progress, their women prematurely aged by the hardness of their lives, had developed a highly elaborate explanation of the universe, its creation, and the human condition.

It was not until 1946 that the Dogon trusted Griaule enough to initiate him into what they call "deep knowledge." Up until then, they had given superficial answers to his questions. But one day an emissary came to Griaule and said: "A hunter wishes to see you."

"Is he sick?" asked Griaule.

"No, he wants to sell you an amulet."

"What amulet?"

"The amulet you ordered ten years ago in return for the bullets."

Griaule had no recollection of that exchange but, sensing a hidden meaning in the invitation, he accompanied the emissary to the village of Lower Ogol near his headquarters in Sanga and was introduced to Ogotemmeli, a Dogon elder who had lost his sight in a hunting accident and had thereafter spent his life contemplating the Dogon system. In conversations on thirty-three successive days, Ogotemmeli instructed Griaule in the Dogon world system. Griaule was impressed and wrote: "These people live by a cosmogony, a metaphysic, and a religion which put them on a par with the peoples of antiquity, and which Christian theology might indeed study with profit."

The Dogon world system, like other religions, is a way of making the universe coherent, a way of finding order and meaning in what otherwise would seem a chaotic natural world. It is also a way of solving problems specific to Dogon society. For the Dogon, living as they do in an ungrateful physical environment with insufficient resources, can survive only through an intense, highly disciplined group effort. Their world system cements the group and gives a higher meaning to its labor. Every Dogon act has a ritual as well as a practical significance. The most trivial object reveals in its shape and decora-

Equestrian priest

tion a symbolic connection to the world system. A Dogon who is weaving, or tilling his field, or sleeping beside his wife is performing necessary practical acts on one level and observing the liturgy of his world system on another. Through a network of myths, symbols, and analogies, the Dogon link the lowly and the lofty, the known and the unknown. Within this network, all human activity is inscribed, from the origin of man to the mystery of death.

In his conversations with Ogotemmeli, Griaule learned that the Dogon believe, like Western man, in a single, distant, immaterial god, called Amma. In the Dogon genesis Amma took a lump of clay and flung it, making the earth. From Amma's first union with the female earth there was born Yurugu, the pale fox, a symbol of disorder. From Amma's second union with the earth, twins called Nummo were born. These were of divine essence, like Amma, and were born perfect and complete, with eight members, which makes eight the most important number in the Dogon system. The Nummo moved freely between heaven and earth and brought back fibers from the celestial granary, from which the first clothing was made. The clothing of the earth symbolized speech.

The pale fox, wanting to possess speech, laid his hand on the fibers—that is, on the skirt—of his mother earth, and incest was committed. The incest endowed the fox with the gift of speech but caused the flow of menstrual blood, which stained the fibers and defiled the earth, introducing disorder into the grand scheme. Amma rejected his impure spouse, punished the pale fox by cutting out his tongue, and continued his work of creation alone. A human pair, the Primordial Couple, was made from clay, but each was bisexual. The Nummo circumcised the man, and the human pair united and had four sets of twins, who are the Dogon's ancestors.

These eight ancestors did not die, but rose into heaven and turned into Nummo. Thus we are shown a creator

Mythical ancestor

who repudiates his creation, an incestuous act that destroys the initial order, and a new order brought about by twin births. Opposing forces are at work in the positive principle of the perfect and immortal Nummo, and in the negative principle of the shrewd and disruptive pale fox. They represent natural oppositions—night and day, dryness and moisture, barrenness and fertility, death and life. The fox is also a symbol of that part of man that rebels against established order. Individual freedom has no place in Dogon society, and the story of the pale fox might be seen as a parable of what happens to the outsider. In the Dogon myth, the fox, who has upset the order of generations and thus of time itself, is punished but allowed to live. The Dogon seem to be saying that the dark side of man, with its destructive instincts and rebelliousness, is part of the human condition and cannot be completely suppressed, though it must be carefully guarded against.

The eight Nummo ancestors returned to earth disguised as serpents and were forbidden to communicate with men. But one of the Nummo serpents broke the prohibition, spoke to men in their own tongue, and forfeited his immortality. Death was thus introduced into the system as the result of another violation of Amma's orders.

The highest form of ritual in the Dogon religion is reserved for Amma and for the dead. The Dogon worship those who preceded them and made possible the development of their society. But they also consider the dead to be dangerous, and a misfortune is often seen as a vengeance of the dead. The Dogon believe that when a man dies, his vital energy, or Nyama, is released and becomes a threat to the living. Funeral ceremonies, usually lasting three days, redistribute the dead man's vital energy among the living in an orderly manner and maintain the harmony between the natural and supernatural worlds. "The masks are awakened," as the Dogon say, and the dead man's friends mime the actions of his life in dances. Only when the proper dances have been performed with the proper masks can the dead man rest and society feel safe.

Almost all Dogon art is connected to the cult of the dead. Granary doors are carved with the stylized portraits of ancestors. Austere standing statues with raised arms represent the link between the living and the dead. The masks used in the rites represent animals with specific symbolic roles, and sometimes include in their decoration an iron ring to protect the dancer against the vital energy that death has set loose.

Aside from these times of formal worship, Ogotemmeli told Griaule, each of the Dogon's daily activities is a religious act that brings him into harmony with the world system. Whenever possible, land is cultivated in plots with eight cubits to a side, each plot symbolizing the flat roof of the celestial granary. Each plot has eight furrows, and each furrow is eight feet long. A plot is likened to a blanket made of eight strips of cloth, and the area of plots around a village is likened to a large blanket. The Dogon link cultivation and weaving, and a man working his plot must start at the east and work west along the first row, then west to east on the next, as a weaver moves the shuttle on his loom.

Dogon houses are typically built with eight rows of ten niches in the front wall, representing the eight ancestors and their descendants. The niches are never closed, so that the ancestors can breathe the outside air. The bed is an earthen platform lying north-south. The man lies on his right side facing west, and the woman on her left side facing east, the same positions they will occupy in the grave. When they unite, the man is said to be like a spirit who brings rain to earth.

Griaule's conversations with Ogotemmeli make Dogon society appear completely determined. Every aspect of Dogon life, down to the way a cap is made or how the cord on a man's trousers is knotted, becomes a projection of the world system and must be done in a certain way. The margin for improvisation is practically nil. Critics of the "Griaule school" question

Women at the well: in a scene that will recur as long as the Dogon exist, the women of Sanga village meet to draw water, rest in the shade, and talk among themselves.

whether the Dogon really observe the multiple prescriptions of their system. They point out that Griaule's research was conducted in a single Dogon community and relied primarily on one informant, a widely respected but atypical elder. Did Griaule apply European logic to Dogon society in order to discover a perfectly coherent system that exists only in theory? Did he magnify the importance of ritual symbolism?

Ethnologists can sometimes "saturate" an ethnic group—that is, the group begins to conform to the theory held by the researchers, with the informants unconsciously assimilating the theory and interpreting their own culture by researchers' assumptions.

But even Griaule's critics give him credit for discovering the spiritual treasure of an apparently "backward" people. Studying the Dogon was like deciphering the first tablet of Linear B, the mysterious scrawls that slowly revealed themselves to be an ancient form of Greek. Because the pattern was complex, it was hard to discern. Instead of being a primitive people, the aimless victims of their surroundings, the Dogon had successfully assured their orderly survival thanks to a highly sophisticated set of beliefs. The paradox lies in the fact that the observance of these beliefs makes change impossible and condemns them to an Iron Age economy. But to Griaule, who died in 1956 and was given a three-day Dogon funeral, the doctrine was "as rich as that of Hesiod, poet of a dead world . . . [and it had] the advantage of being expressed in a thousand rites and actions in the life of a multitude of living people."

Sanche de Gramont's latest book is The Way Up, *fictionalized memoirs of his eighteenth-century relative, Count Gramont. The late Eliot Elisofon—photographer, collector, connoisseur of African art—was a frequent contributor to* HORIZON.

The Discovery of the Mediterranean

And of death, romance, light, passion, roast game birds, love, peril, beauty, pleasure, art, the natives, happiness, and everything else—by the nineteenth-century Romantics

For the funeral pyre of a romantic poet, there could hardly have been a more propitious setting. In the foreground, a vast expanse of blue and windless Mediterranean with the islands of Elba and Gorgona visible on the horizon. The coast, descending from a range of white marble mountains, was a stretch of sandy wilderness tufted with underbrush. Here, at the edge of the Bay of Lerici, at four in the afternoon of August 27, 1822, a fire was built to consume the earthly remains of the greatest lyric poet of the age.

"You can have no idea," wrote Byron, the principal mourner, "what an extraordinary effect such a funeral pile has, on a desolate shore, with mountains in the back-ground and the sea before, and the singular appearance the salt and frankincense gave to the flame. All of Shelley was consumed, except his *heart,* which would not take the flame. . . ." At Byron's side was the "pirate," E. J. Trelawny, and Shelley's cousin, Thomas Medwin; and, slumped in a nearby carriage, unable to face the scene, was that unhappy man of letters, Leigh Hunt, who had arrived in Italy only a few weeks before and was now in a state of nervous prostration. Byron's nerves, too, were overwrought: taking off his clothes, he plunged into the sea—the same treacherous blue waters that had claimed his friend's life—and swam to his yacht anchored offshore.

In 1845 when Joseph Severn portrayed Shelley (opposite) "composing Prometheus Unbound *in the Baths of Caracalla," the poet had been dead some twenty years, and his Italian adventures had taken on mythic proportions.*

What Byron evidently had in mind was a Ganges-like immersion to refresh the body and restore the spirit. Symbolically, it was a tribute to the great Mother Mediterranean who had brought both Byron and Shelley to this siren shore, and to whom both had dedicated the best years of their poetry: the poet is dead; long live the (long-distance-swimming) poet!

If the Mediterranean had not already existed, the romantics would have had to invent one. As it was, they discovered it anew and made it a focal point of European art, literature, and music. They may not have been model tourists, but they made certain that everyone would remember their travels in the land of the lemon orchard and the olive grove: Goethe, wandering among the mountains of Sicily; Stendhal, star-gazing at La Scala; Turner, discovering the dazzling quality of light in Venice; Chopin, writing his Raindrop Prelude during a storm on Majorca (or so George Sand would have us believe); Delacroix on the Barbary Coast, Chateaubriand in the Holy Land, Mérimée in Andalusia . . . the whole cultural topography of Europe suddenly tilted south.

It was like a second Renaissance or a latter-day Crusade in which the romantics enlisted, not to conquer but to be conquered, not to convert but to be converted. "Only in Rome did I learn what it actually means to be a human being," Goethe admitted in later years. "I never again rose to such heights, to such joys of consciousness; compared to what I felt in Rome, I was never really happy again." Though some of the less lucky ones, like Keats, came only in time to die, this was the kind of elemental experience that the Mediterranean could be counted on to provide; it was a place for insights and turning points.

Here, in the Mediterranean sunlight, Géricault and Corot began their private revolutions in painting. Here Stendhal first sensed that "happiness is contagious" in a realm where "nature rules supreme," and that his destiny lay in *la chasse au bonheur,* the pursuit of happiness. Here, in about a year's time, Berlioz found the background material for virtually all the major works he was to compose for the rest of his life. Here Flaubert experienced "the beginning of this nameless something" that was to be his life as a writer.

Not that they were the first artists from the north to make this pilgrimage: Milton, Dürer, Handel, and Mozart were among their predecessors. But the romantics were the first to roam the region more or less at will, without having to rely on the patronage or protection of a great prince. In the century in which privilege gave way to talent, the artist could exercise his geographic as well as his social mobility. The golden age of Mediterranean tourism is at hand; the roads are becoming passable; even the poorer poets can buy a ticket.

By FREDERIC V. GRUNFELD

Nor was there any question but that every artist ought to make the journey. "The grand object of all travelling is to see the shores of the Mediterranean," declared Dr. Johnson when, alas, he was already too old to follow his own advice. "All our religion, almost all our law, almost all our arts, almost all that sets us above the savages has come to us from the shores of the Mediterranean." That was the classical rationale, at any rate, for undertaking so long and arduous a voyage. The romantic reason, however, was often something else—a deep, passionate longing for the south.

For those who were able to go, it was a matter of the heart rather than the mind, and of the five senses, which, as Stendhal keeps insisting, were constantly engaged in a land where "the physical sensation of beauty is wafted at you from every side, like puffs of wind." Beyond that, the south promised the satisfaction of other appetites, including those of the stomach. Stendhal says that the joys and pleasures of a supper whose ingredients are roast game, birds, polenta, and *joie de vivre* "seem to extend the very frontiers of experience in the domain of animal satisfaction—the intensest field of sensation. I should dearly like to see some English *methodist* transported into the climax of such an orgy; either he would call down fire and brimstone or else he must assuredly go and hang himself."

In this climate of physical fulfillment, those who do not know about love can learn it, and those who do can practice to improve their game, for there is never any lack of partners willing to play. Of all the truths revealed to him on his famous Italian journey, this was the one that affected Goethe most profoundly. Cagily enough, it is the one he neglects to mention in his public account of the *Italienische Reise.*

Goethe came to Italy when he was thirty-seven, already the best-known writer in Germany. What he lacked was any significant prior history of pleasure. At the court of Weimar he had cultivated an exquisitely literary relationship (some seventeen hundred letters' worth) with the cool and slim Charlotte von Stein, a lady six years his senior whose mission, as he told her, was to "make something" of him. In Italy, alone at last, he had time to lust after some other things besides self-improvement. Though his memoirs only hint at this, Goethe confesses his secret, delicately couched in classical hexameters, in the love poems called the *Roman Elegies* (as translated here by Michael Hamburger):

Happy now I can feel the classical climate inspire me,
Past and present at last clearly, more vividly speak. . . .
But throughout the nights by Amor I'm differently busied,
If only half improved, doubly delighted instead.
Also, am I not learning when at the shape of her bosom,
Graceful lines I can glance, guide a light hand down her hips?
Only thus I appreciate marble; reflecting, comparing,
See with an eye that can feel, feel with a hand that can see.
True, the loved one besides may claim a few hours of the daytime,
But in the nighttime hours too makes full amends for the loss.
For not always we're kissing; often hold sensible converse.
When she succumbs to sleep, pondering long I lie still.
Often too in her arms I've lain composing a poem,
Gently with fingering hand count the hexameter's beat
Out on her back. . . .

It says a good deal for Goethe's earnestness as well as his powers of persuasion that he can have us half believing that stroking a bare back comes under the heading of adult education. His biographers have never been able to discover the identity of this woman, addressed as "Faustina," who helped convert him to the paganism of the Mediterranean. But her name is not really important, for the transformation was preordained, and the dark lady of the *Elegies* was merely an accessory after the fact. "This revolution which I foresaw and which is now taking place within me," he writes in his Italian diary, "occurs in every artist who has long been faithful to nature, and now beholds the remnants of the great spirit of the ancients; his soul swells up, and he feels himself undergoing a kind of inner transfiguration—a sense of greater freedom in life, of existence on a higher plane, a lightness and grace."

Of all the artists who experienced this inner revolution, Goethe was psychologically the best prepared for it. He had been dreaming of Italy for years, and his acute longing was expressed in his novel *Wilhelm Meister,* begun some years before his escape: Mignon, a child from the south, sings the famous *lied* that expresses Goethe's yearning:

Do you know the land
where lemons grow,
And golden oranges
among the dark leaves glow?
There where a soft wind
breathes from the sky,
The myrtle stands there still,
the laurel high.
Know you it well?
There, oh there,
Would I with you, my sweet beloved, fare!

One day in the summer of 1786 Goethe himself could no longer contain his wanderlust. Without telling anyone but his valet, he left for Rome.

Though he did not want to be known as a "romantic," Goethe nevertheless established the itinerary for the romantic discovery of the Mediterranean: he climbed Vesuvius and watched it erupt at such close range that flying debris rained down on his head; he saw an authentic Greek temple for the first time, at Paestum, near Naples, and was annoyed that these squat, bulky columns failed to resemble more closely the neo-Grecian architecture he admired; he thought Naples an earthly paradise for landscape painters, but felt vaguely threatened by the leisurely existence of the people he met.

Traveling on the Mediterranean itself provided Goethe with another essential romantic experience. Returning from Sicily early in 1787, he came close to being shipwrecked when his vessel drifted

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At the Roman Carnival: riderless horses race on the Corso

BERLIOZ GÉRICAULT GOETHE

The horse race that climaxed the carnival frenzy seemed to Goethe a splendid throwback to the pagan era, and Géricault thought it a fit subject for painting; but Hector Berlioz, though he considered Italy endlessly inspiring, found the whole carnival detestably tawdry.

into the currents off Capri and seemed headed for destruction on the cliffs:

> The women and children knelt on the deck or lay huddled together, not in order to pray, but because the deck space was too cramped to let them move about. The men, with their thoughts ever on help and rescue, raved and stormed against the captain. . . . Now they called him and his helmsman mercenary adventurers who knew nothing about navigation, but had got hold of a boat out of sheer greed, and were now by their incompetent bungling about to bring to grief the lives of all those in their care. The captain remained silent and still seemed preoccupied with saving the boat. But I, who all my life have hated anarchy worse than death, could keep silent no longer. I stepped forward and addressed the crowd. . . . I pointed out to them that, at such a moment, their shouting would only confuse the ears and minds of those upon whom our safety depended, and make it impossible for them to think or communicate with one another. "As for you," I exclaimed, "examine your hearts and then say your prayers to the Mother of God, for she alone can decide whether she will intercede with her Son, that He may do for you what He once did for His apostles on the storm-swept sea of Tiberias. . . ."

This very Goethian lecture had its intended effect, and as a pious hush fell over the passengers the captain and crew managed to avert disaster. But there is something strangely familiar about the episode. Where have we seen it before; where shall we see it again? It has the feeling of a set piece or an operatic ensemble. Indeed, this Mediterranean shipwreck scene is almost obligatory as an initiation for the romantic traveler, not only because he envies Ulysses, forever storm-tossed into the arms of waiting women, but because tempests are in complete accord with his whole *Weltanschauung,* and life, like the sea, is fraught with Scyllas and Charybdises. The Mediterranean, moreover, is a particularly treacherous body of water, usually smooth as glass but occasionally, without warning, more furious than the South Seas in a typhoon. The resulting crisis on shipboard at such moments gives each wandering poet a chance to show his mettle. Most (except poor Shelley) come through the ordeal little short of heroically, if we can believe their letters and memoirs. Here is Byron, for example, sailing from Greece to Albania in 1809:

> Two days ago I was nearly lost at sea in a Turkish ship of war, owing to the ignorance of the captain and crew, though the storm was not violent. Fletcher [his valet] yelled after his wife, the Greeks called on all the saints, the Mussulmans on Alla; the captain burst into tears and ran below deck, telling us to call on God; the sails were split, the main-yard shivered, the wind blowing fresh, the night setting in, and all our chance was to make Corfu, which is in possession of the French, or (as Fletcher pathetically termed it) "a watery grave." I did what I could to console Fletcher, but finding him incorrigible, wrapped myself up in my Albanian capote (an immense cloak), and lay down on deck to wait the worst.

Later, when the wind had abated and his friends came to look for him, they found him fast asleep. This is Byron at his best, his own finest work of art: when others panic, he goes to sleep; when others mourn, he goes for a swim.

Alexandre Dumas foundered in a storm off Stromboli, Berlioz claimed that his captain nearly capsized the vessel he took to Livorno in 1831—but is it statistically possible that there could have been so many hopeless incompetents sailing around the Mediterranean? It seems safe to assume that at least some of these emergencies were inflated like a balloon jib by the romantics' tempestuous imaginations. In any event, such an adventure seals the artist's secret pact with the Mediterranean; from then on he belongs to the select company of those who have *risked their lives* on this wine-dark southern sea in order, as Goethe says, to "enlarge my vision of the world."

Goethe thought at the time that everything he had seen and felt in Italy would be summed up in the expanded version of *Wilhelm Meister* he was planning to write. Instead, the real beneficiary of his Mediterranean experiences was *Faust,* the most important book of the romantic age, on which he was to work sporadically for the rest of his life. Many of the main themes and ideas of *Faust* can be traced back to the year and a half Goethe spent in Italy; indeed, the very voyage of discovery on which Faust sets out, and for which he mortgages his soul to Mephistopheles (an early form of fly now, pay later), is metaphorically related to Goethe's own voyage of self-discovery.

The great Faustian, romantic conflict of the divided self—"two souls live, *Ach!* within my breast . . ."—is spelled out in some pages of prose Goethe wrote in Naples: "Man is an extraordinarily complex being, in whose nature absolutely contradictory elements coexist, the physical and the spiritual, the possible and the impossible, the attrac-

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The romance of piety: a procession of friars in Rome

BYRON

HEINE

TURNER

Romantics like Byron—who found Catholicism "elegant"—loved ecclesiastical pageantry as much as they did the pagan antiquities. J. M. W. Turner delighted in depicting Saint Peter's, as well as in re-creating scenes of pagan worship. Heinrich Heine, a more doctrinaire neopagan, however, found modern Italy "operatic."

tive and the repellent, the bounded and the unbounded." This is a very modern view of the psyche, and one of the reasons why Freud considered Goethe, along with Blake, as one of the forerunners of psychoanalysis. Yet the *Faust* story hinges on the Gothic idea that great knowledge leads to great sin, and that blind faith is the road to salvation—a contradiction Goethe never resolved but simply bypassed by treating this Christian subject in a thoroughly pagan way. His hero indulges the flesh and never repents, just as Goethe suggests that he himself would cheerfully have bargained his soul for that one moment of which he could say, *"Remain thou, thou art so beautiful!"*

As for the other great Faustian leitmotif, the Eternal Feminine that drives him ever onward, it was while drumming out the hexameter's beat on Faustina's back that Goethe was introduced to the erotic world Faust encounters in Helen of Troy. Helen embodies the same ideal of physical beauty and Mediterranean passion that, in another of the *Roman Elegies,* is identified with the "Goddess Opportunity":

Once she appeared to me also, a girl with brown hair
Which fell in dark profusion over her brow;
Short locks ringed her frail throat,
And whisps of curls, unplaited, circled her head.
I did not mistake her, and seized her hurrying form; soon
She returned my kiss and embrace in gentle instruction.
O how happy she made me!

This dark-haired, joy-giving, full-breasted goddess is the tutelary deity of the Mediterranean, and has much to do with the continuing popularity of the place. It is not unusual for a romantic poet to confess that he had never known what real passion was until he experienced it in her arms. Perhaps part of her reputation for voluptuousness is pure wishful thinking, though of a self-fulfilling kind: the northern Calvinist, with his guilt-ridden notions of sex, projects his repressed fantasies onto the women of this sunburned land, whose very climate is supposed to make them more hot-blooded and elemental than the girls he knows at home. The south, in his eyes, becomes synonymous with sultry females.

The sensuality of these southern beauties often works in mysterious ways, and the newcomer is surprised to find that their mating habits are just the reverse of what he is accustomed to. "When a woman marries she throws off all restraint, but I believe their conduct is chaste enough before," writes Byron from Cadiz in 1809, during his, as it were, maiden voyage to the south. "If you make a proposal, which in England would bring a box on the ear from the meekest of virgins, to a Spanish girl, she thanks you for the honor you intend her, and replies, 'Wait till I am married, and I shall be too happy.' "

When Byron settled in Italy he learned that for a married woman to have a lover—a so-called *cicisbeo* or *cavaliere servente*—was the order of the day. "The reason is, that they marry for the parents, and love for themselves." Once started, they tend to become very good at it. "Love is not the same dull, cold, calculating feeling here as in the North . . . it is a want, a necessity . . . they begin to love earlier, and feel the passion later than the Northern people." Yet the system was not as sexually liberating as it seemed. When Byron became the acknowledged *cicisbeo* of the Countess Guiccioli, a beautiful nineteen-year-old who had married a nobleman of sixty, he discovered that the lover was supposed to be more loyal than any husband would ever be.

Byron was gallant about it, but he felt vaguely trapped. During his first year in Venice, he had kept mistresses and run through the available women like a deck of cards, entertaining as many as nine at a time. "It is a very good place for women," he decided. "There is a naiveté about them which is very winning, and the romance of the place is a mighty adjunct. . . ." He was, however, inclined to be far less rapturous than Goethe in appraising his love objects. "She plagues me less than any woman I ever met with," is the highest compliment he can think to pay his first Italian mistress.

With his schoolboy penchant for boasting of his conquests, Byron may qualify as a material witness, but hardly as an insightful observer of the scene. It is Stendhal who should be consulted on the more subtle aspects of love in the Mediterranean—Stendhal, for whom happiness is a coefficient of the south, and the art of living virtually an Italian monopoly. Unlike most of the other expatriates, he is not content merely to transplant his native habits to this foreign land; he creates a whole new

way of life that will give him an insider's taste of the local pleasures. He becomes an ardent opera-lover, for one thing: happiness, for Stendhal, is neither a museum nor a bordello but a theatre. "If I ever amuse myself by describing how my character was formed by the events of my youth, the *Teatro della Scala* will be in the front rank."

Stendhal's first great love, Angiola Pietragrua, was a raven-haired beauty whose "grace filled with voluptuousness" summed up the very qualities he loved about Italy. He saw her first when, not yet eighteen, he came riding into Milan at the tag end of the Napoleonic campaign of 1800—but he did not manage to sleep with her until 1811, when he returned to Italy on military leave and confirmed his impression that "*love* under such skies is a pure delight; no other land knows aught but the palest *imitation.*"

After Napoleon's retreat from Moscow, Stendhal was back again as a refugee from the shambles of Restoration France. He stayed on for seven years to begin his career as a writer and to lay the groundwork, for, among other things, *The Charterhouse of Parma*, surely the greatest of his books on Italy. His guide to *Rome, Naples and Florence*, one of his earliest, is also an introduction to the study of the Italian heart: how to achieve terrestrial happiness by keeping one's passions always fully occupied. His object in doing the Grand Tour, he says, was not to discover Italy but to lay in a store of pleasures. As a result, his book is every romantic's Mediterranean what's what. He teaches his readers how to flirt at the opera, how to hold converse with an archbishop, and how to get on in an unknown city—ask a knowledgeable native to name the dozen wealthiest men, the dozen prettiest women, and the one most scandalous villain in town; then cultivate acquaintance first with the scandalous villain, next with the pretty women, and finally with the millionaires.

At the end of seven years as a resident authority on love, art, and opera, Stendhal was hounded out of Italy by the Austrian government, which then ruled Tuscany. But after the July Revolution of 1830 he was back again, this time with an official appointment as French consul at Civita Vecchia, just north of Rome. Living in that ancient seaport, he became the perfect model of the expatriate who has gone native and tries to outdo the Romans at their own games. Berlioz, in his student days, caught a glimpse of Stendhal at the Roman Carnival, where it was customary for diplomats and men of fashion to parade their carriages among the wilted cabbages of the vegetable market in the Piazza Navona:

"And who is that paunchy little man, with the malicious smile, trying to look serious?"

"He is a clever man who has written about art, and is consul at Civita Vecchia; he considers himself forced to come here and loll in his carriage in this slum, because it is the *fashion;* he is now contriving a new chapter for his novel, *The Red and the Black.*"

Stendhal's judgment was certainly not infallible, but he had an unerring ear for what made a good Italian opera, as well as a sixth sense for the interaction of music and audience. He loved La Scala because no other place afforded so much pure pleasure through the medium of music, and because social life in the boxes—even while the performance was going on—was utterly fascinating. "Never a hint of a withered heart or a countenance of despair," he noted. "As a general rule, every woman is escorted by her lover; mild sallies of wit there may be, even lively arguments and wild bursts of laughter; but solemnity and self-importance have been banished from the earth."

A box at the opera was regarded by many of the romantics as a strategic place from which to view the Italian scene. Heinrich Heine, the only writer who can hold a candle to Stendhal as an observer of the nineteenth-century heart, surveys the audience through his opera glasses in the *Florentine Nights* and comes away quietly enthralled: "How beautiful they are, these Italian women, when music illuminates their countenance! . . . The whole life of the fair Italian women becomes known to us when we see them at the opera; the changing melodies awaken in their souls a succession of emotions, memories, desires, scandals, that speak visibly in the movements of their faces, their blushes, their pallors, their eyes."

Despite the sensuousness, and the beauty, not every visiting romantic is enchanted by the women he sees in the south; there are some, indeed, who send back almost paranoically negative reports. The Englishman William Hazlitt, otherwise one of the most perceptive critics of the age, dismisses them all with a scornful flourish of the pen shortly after beginning an Italian journey in 1825: "The women of Italy (so far as I have seen hitherto) are detestably ugly. They are not even dark and swarthy, but a mixture of brown and red, coarse, marked with the small pox, with pug features, awkward, ill-made, fierce, dirty, lazy, neither attempting nor hoping to please."

The country had worked its magic on Hazlitt, but, like many others, he suffered from that nameless northern prejudice against things southern that is akin to race prejudice. It can be found, with local variations, throughout the world: "dirty, lazy, ill-made, stupid" is traditionally what the Tuscans call the Sicilians, the Catalans the Andalusians, or the Punjabis the South Indians. Many northerners who come south prepared to love the Mediterranean are nevertheless deeply suspicious of the people who live there. It is only a short step, after all, from admiring the natives for being children of nature to despising them for being boors. Chopin, on Majorca, talks about "living in the most beautiful surroundings in the world," and describes the sky as being like turquoise, the sea like lapis lazuli, the mountains as green as emeralds, and the air as in heaven, but the people—"the people are rogues." Byron, at least, is prepared to lay down his life to help the Greeks win their independ-

ence, yet he rarely has a good word to say for them. Basically, he seems to have felt that "Fair Greece! sad relic of departed worth!" had got the government those cunning Levantines deserved.

The south retaliated, after a fashion, by making things as difficult as possible for the inexperienced northerner. The life of a tourist in the Mediterranean was still fraught with risks and inconveniences, not only on shipboard. The dreaded *mal-aria* (bad air) lurked in the marshes; there were recurrent cholera epidemics; small children were apt to be carried off by mysterious fevers. The day of the beach cult was still distant, but sunburn was not unknown. "I have been lately ill (*all* my skin peeled off) from swimming three hours in a hot sun at Via Reggio," writes Byron in 1822.

More dramatic but less predictable were the long knives lying in wait for the unwary: in many regions the streets and highways were infested with every sort of violence and crime. Assassination was an accepted form of settling political differences and private disagreements. Count Guiccioli, the husband of Byron's mistress, had a well-deserved reputation as an assassin, and Byron was worried until he discovered that as a *cavaliere servente* he led a charmed life. Shelley personally witnessed a wanton killing while on a visit to Naples: "A youth ran out of a shop pursued by a woman with a bludgeon and a man armed with a knife. The man overtook him, and with one blow in the neck laid him dead in the road. On my expressing the emotions of horror and indignation which I felt, a Calabrian priest who travelled with me laughed heartily. . . ." Stendhal tells hair-raising stories of travelers vanishing without a trace on the high road from Bologna to Florence: the bandit confederates of an innkeeper had been killing coachloads of victims in their beds, then burning everything except money and jewels in one grim funeral pyre in the mountains. In Spain, writes Théophile Gautier, not only robbers and guerrillas but also innkeepers are "all ready to plunder and ill-treat you, and . . . regulate their honesty by the number of carbines that accompany you."

The authorities, not to be outdone, make public examples of the bandits they catch. The streets are cleaned by gangs of convicts clad in red and chained together two-and-two. "All day long one hears the slow clanking of their chains, and the rumbling of the cart they drag as if they were so many Beasts of Burden," writes Shelley from Pisa, "and if one goes to the window one is sure to see their yellow faces and emaciated forms." Traveling in the Papal States, the Austrian poet Franz Grillparzer notes that the road to Rome is made all the more desolate by "the torn remnants of robbers and murderers which, dried in the sun, dangle right and left beside the road, and remind travelers of the sites where their predecessors were robbed and killed."

It was then still the custom, as it had been in ancient Rome, to execute criminals as part of the carnival festivities. Berlioz, who hated the practice, gives a detailed account of it in his memoirs. Though he composed some of the most brilliant music ever written for the carnival scene in *Benvenuto Cellini,* he personally detested the whole idea of the carnival, with its "coarse jokes, and street girls, and drunken detectives; vile masks, worn-out hacks, laughing fools, gaping idiots, and weary idlers." What roused him to a real fury, however, was the ceremonial execution:

> . . . some poor devil under sentence of death was retained for the purpose; he, too, was fattened, so as to be worthy of the god (the Roman people) to whom he was to be offered up; and when the hour struck, and this rabble of fools from all nations (for it is only fair to state that the strangers were as keen after these noble sports as the natives), this horde of well-dressed savages, was weary of watching the races, and pelting one another with sweetmeats, and laughing at the refinement of their wit, they adjourned to see the man die; yes, the *man!* They do well, these worms, to call him such.

This was the other side of the Roman coin, but it was not something to be deducted from the experiences of the Mediterranean, the sum total of sea and sun and lemons and ruined temples; it was part of the magnetism the south exerted on the northern imagination, and in a terrible way was perhaps even essential to it. The carnival in Rome was the one week each year when the paganism of the Mediterranean emerged from its ancient hiding places. And this paganism was precisely what fascinated the romantics and made them linger, horrified, hot, and thirsty, while human sacrifices were offered up for atavistic reasons.

That the whole affair was a throwback to pagan practices did not escape Goethe, who wrote a carefully factual essay on the Roman Carnival, calling it a modern version of the feast of the Saturnalia. Unlike Berlioz, he was vastly amused by the noisy crowd and the crush of carriages in the streets, the practical jokes, the sexual license, the serenaders, transvestites, and punchinellos, the likes of which were certainly not to be found in Weimar. For him the high point of the carnival was the race of the riderless Berber horses on the Corso—an unforgettable symbol of the unbridled licentiousness that still reigned among the people. He describes the excited horses being led into the Corso amid yells from the crowd: sheets of tinsel are fastened to their backs and leaden balls spiked with needles dangle from their sides, spurring them to a frenzy. A furious struggle ensues as the grooms try to restrain the horses, until, at a signal, the rope falls and they charge pell-mell down the street. At the finish line there is another knot of maddened horses and cursing men as grooms try frantically to bring the animals under control once again.

No artist or poet could travel very far in the Mediterranean without running into scenes of this kind: the bullfight, vestige of the sacramental killing of a god; the parades of maskers and *cabezudos,* of penitents and religious flagellants; the *santos* and mysterious black madonnas carried in procession; the dances around bonfires on Saint

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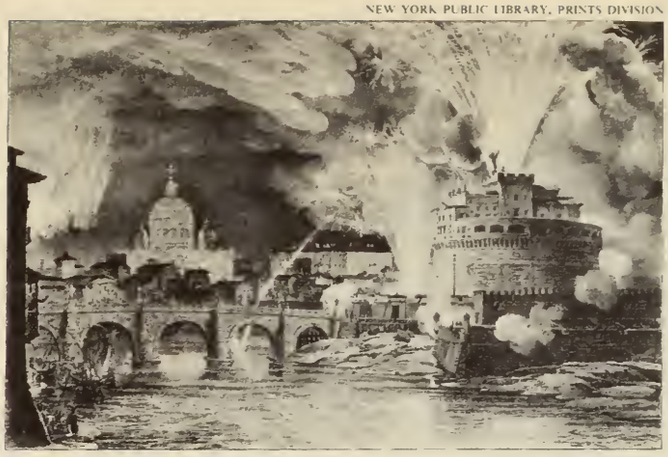


Rome as a summer festival: fireworks at Castel Sant'Angelo

STENDHAL

COROT

INGRES

The Castel Sant' Angelo (Hadrian's Tomb) was and is a major attraction for sightseers. Stendhal pronounced the annual fireworks there "the finest I have ever seen." His fellow expatriates Corot and Ingres admired the picturesque architecture of the former mausoleum.

John's Eve; the pilgrimages to caves with healing properties; and the violent prophecies chanted by child sibyls from church pulpits on Christmas Eve. All these were remnants of a mythology and a way of life that had existed long before the birth of Christ and that had refused to give way to Christianity.

The rationalist Gibbon, in his sprawling history of the Roman Empire, took a critical view of what he considered to be the corruption of the Christian ideal by pagan practices. But the romantics were far more sympathetic; they interpreted these remnants as part of the great cultural continuity of mankind. For them, the surviving religions of the Mediterranean, whether Roman Catholic, Greek Orthodox, Moslem, or Jewish, displayed a breathtaking capacity for absorbing new influences and beliefs without relinquishing the old ones, so that each could comfortably accommodate everything from the earliest pagan rituals to the latest doctrinal reforms.

The romantics did not have to wait for Sir James Frazer to explain the magic that lay concealed in pagan and religious traditions. They came from countries where myth and religion had largely given up the ghost, and they themselves were mainly freethinkers and agnostics. But here they felt themselves drawn into the continuity of the Mediterranean and, once again, part of ancient tradition. Byron, a scoffer at home, used to dismount from his horse whenever a procession was passing by, kneeling on the street until it had passed. He wanted to raise his daughter as a Catholic because he had come to admire "tangible" religion: "It is by far the most elegant worship, hardly excepting the Greek mythology. What with incense, pictures, statues, altars, shrines, relics, and the real presence, confession, absolution—there is something sensible to grasp at," he wrote.

Even the most skeptical among the romantics came to realize that here in the olive groves the gods were not dead, they only wore new disguises. "Here the very stones speak," said Heine, "and I understand their silent language. . . . At night I can understand all of Italy; then the modern people with their operatic language are asleep, and the ancients climb out of their cool beds and speak to me in the purest Latin." It was Heine who wrote a collection of stories about the later history of the pagan gods and their metamorphosis in the Christian world. One of these tales concerns the young fisherman on a lake in the Tyrol who manages to spy on three strange monks who take away his boat every year on the night of the autumnal equinox. From his hiding place he sees them hurrying to a great outdoor festival where there are hundreds of young women, as beautiful as pictures, and many handsome young men wreathed in vine leaves.

What the astonished fisherman was watching, Heine explains, was the bacchanalia of the gods in exile, returning from their new places of employment "to perform once more their ancient, joyous, divine service, once more, with sport and merrymaking, to celebrate the triumphal march of the divine liberator, the Savior of the senses; to dance once more the merry dance of paganism, the *can-can* of the antique world, without fears of the interference of the police of a spiritualistic morality, with the wild abandon of the old days, shouting, exulting, rapturous."

And that, in essence, was why Heine and his friends came to the Mediterranean: to join in the great pagan dance, tap-tap-tapping the hexameter's beat on every kind of resonating surface. That was why Stendhal found it necessary to loll in his carriage at the carnival, why Byron had to swim the Hellespont, and Gautier risk his skin on the Spanish highway. If there was anything that the romantics had in common, it was their confirmed belief, with Keats, in the imminent second coming of mankind.

It was here, at the fountainhead of the world to which they wanted to give another heart, that the necessary materials were to be found. *"Il faut méditerraniser la musique,"* said Nietzsche later in the century, after he had heard too much Wagner. But the romantics did not have to be told to "Mediterraneanize" their art. They realized instinctively that if one wanted the world, literally, to come to its senses, the secret had to be learned from this earthly paradise in perpetual commerce with external nature. As Shelley wrote, just as he was learning to sail: "We drive along this delightful bay in the evening wind under the summer moon until earth appears another world . . . and if the past and future could be obliterated, the present would content me so well that I could say with Faust to the passing moment, *'Remain thou, thou art so beautiful.'*" Perhaps that was why he never learned to swim.

What Exactly Was the Cold War?

When and where did it begin? Why?
Who started it and could it have been avoided?

By DAVID SCHOENBRUN

And is it really over even now? These are fascinating questions that have been posed and answered by historians, revisionists of history, and just plain citizens, for the past quarter century and more.

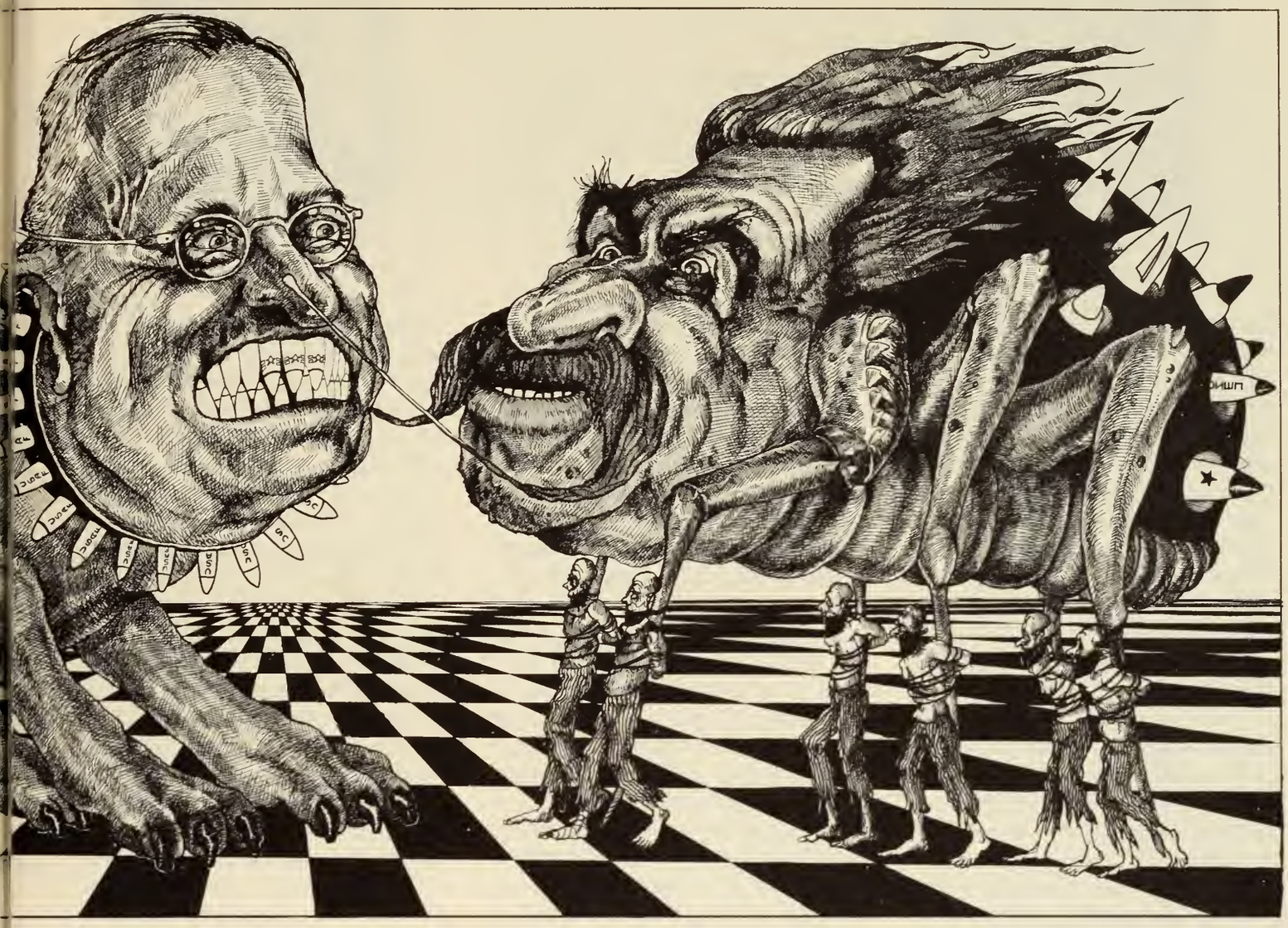
In 1951 Joseph M. Jones, a State Department officer who worked on the "Acheson team"—the basic brain trusters on the American side of the Cold War—published *The Fifteen Weeks*. It told the story of the Truman Doctrine, which created a new American role of intervention in the world. Jones, who later became a professor at the Fletcher School of Law and Diplomacy at Tufts, is the spokesman for the school of historians that views Truman as the hero, the Galahad of the "free world," and Stalin as the villain, the Lucifer of the "slave bloc." This school has argued that the Russians, the Communists, started the Cold War as part of their drive to conquer the world. Even as recently as the end of the sixties, this view prevailed in the United States.

But at the height of the war in Vietnam, dissident critics, in the media and in the universities, began to re-examine the premises of American views on the Cold War. The most vigorous and able historian of this "revisionist" school is Professor Gar Alperovitz of Harvard, whose research and writings at the John F. Kennedy Center have influenced a new generation of students and scholars. Alperovitz maintains that Russia emerged from World War II in a state of complete exhaustion. Its cities had been ravaged and twenty million of its people killed, wounded, or crippled.

The triumphant Red Army was, of course, intact, and the most powerful land force in Europe, but the Soviet Union lacked the resources, the infrastructure, to support any expansionist drive. This school argues that the Soviets' main concern was to prevent a new "cordon sanitaire" from strangling the U.S.S.R., and thus that the Soviet position was basically a defensive position, not offensive.

There is enough truth in these contradictory schools of thought to give credence to each of them. But each is highly selective of the truth, choosing only the evidence that supports its thesis. Certainly the time has now arrived for an overview, for an effort to perceive the whole truth about the struggle that has come to be known as the Cold War.

Although its history is vast and com-



plex, the Cold War was essentially a struggle for power between the Soviet Union and the United States. During most of its course, America and Russia were the principal protagonists, leaders of rival blocs in a bi-polar world. Midway through the struggle a new-old giant emerged, China, followed by two economic powers, Japan and, through its Common Market, Europe. The great powers, Russia and America, towered over the jungles of the world like prehistoric mammoths, for a time reducing all others to the status of "ant nations." But down below in the world's underbrush, these ant nations soon began to stir—in Vietnam, Cuba, Algeria, the Congo, and Nigeria; in Czechoslovakia, Hungary, and Poland; in Israel, Iran, and Chile—crawling discomfortingly up and down the trunks and stinging the rumps of the mammoths.

In one sense, the Cold War was not a simple contest between America and Russia; it was a political and military passion play of great and terrible dimensions and consequences. But it did not exist of and by itself. It had a prehistory and it has a post-history, and it began, suggests Henry Roberts, for many years Director of the Russian Institute of Columbia University, with the Russian Revolution and the Western reaction to it. After the October Revolution of 1917, civil war broke out between Reds and Whites in Russia. Allied leaders, fearful of the Revolution itself and of the consequences on the Russian front, began to move forces into Russia. Woodrow Wilson approved the dispatch of American troops to be used in the occupation of the vital ports of Murmansk and Archangel, justifying the move by stating its purpose as "the protection of Allied stores and war materiel against threatened seizure by advancing German forces." British and French troops, in greater numbers, not only moved in but actually joined the czarists and fought against the revolutionary Bolsheviks. American troops were ordered not to participate in the fighting, but the embattled Communists drew no distinction between the Anglo-French and the Americans: all were capitalist troops fighting them and occupying their northern ports.

In the Far East, the Japanese had also moved. They occupied Vladivostok, and the Soviets saw themselves encircled by capitalist and imperialist forces. They never forgot the nightmare of this intervention. It contributed to

U.S. meets U.S.S.R., April, 1945

The first battle of the Cold War was fought in the heart of Europe over the wreckage of Germany. American and Russian forces had met and joyously embraced on the Elbe as Germany went down in unconditional surrender, but the embrace soon tightened into a grim deadlock because of the Allies' decisions at Potsdam.

The Big Three at Potsdam, 1945

the miasma of mistrust, fear, and suspicion that would reach its apogee three decades later in the Cold War.

Professor Roberts gives appropriate weight to the argument that the intervention of 1917–18 colored East-West relations from then on. However, in his essay "Russia and America," he emphasizes that the split between Russia and America arose principally out of the personalities of Thomas Woodrow Wilson and Vladimir Ilich Lenin. According to Roberts, Wilson projected upon the world scene "an American concept of Town Hall democracy," while Lenin also responded to "an internal mechanism—the class struggle—as against external mechanisms, such as the balance of power." Both men, he argued, failed to understand the world as it was and sought to reshape it according to their own native experiences, couching their prejudices in utopian terms. "Further complicating and deteriorating their relationships, neither Wilson nor Lenin knew much about the other's country, a condition that has afflicted most of their successors to date."

In the past thirty years, we have seen the results of the Wilsonian-Leninist confrontation of utopian visions, and seen them complicated by self-righteousness and a crusading, proselytizing spirit. If Russians and Americans were only utopian dreamers and high-spirited missionaries, their hot- and cold-running battles would long ago have ceased. But both peoples, and certainly those who rose to leadership from the ranks, were the most cynical of dreamers, the most tyrannical of missionaries, determined to save the world if they had to destroy it in the process.

Rival visions of a world order were heightened by parallel developments of the Soviet and American strategies through the twenties and thirties. The Soviets launched their Internationals, global networks of Communist parties directed from and loyal to Moscow, frightening the Western capitalist countries with the specter of subversion, of fifth columns, of a red Trojan horse within the gates. On the other hand, capitalists built cartels, combines, and multinational companies—and created an economic cordon sanitaire around the Soviet Union, frightening the Russian leaders with the specter of encirclement, isolation, and new military invasion by capitalist armies.

Beyond that, the rise of Hitler with his pathological anti-Communism—and the simultaneous appearance of pro-Hitler cliques among industrialists and capitalists in France and England—seemed to Stalin part of the capitalist conspiracy to destroy the Soviet Union. Equally certain that the capitalists were "cannibalistic sharks," he devised a strategy of setting one against the other, forming a temporary alliance with Hitler to induce him to move to the West while he himself prepared for the eventual conflict that would come in the East. Munich was proof enough to Stalin that the Western democracies were decadent and that they intended to bribe Hitler into spearheading the attack against Russia. Thus, each nation persuaded itself that the other was not merely a power-rival but a terrifying demon that had to be destroyed.

Classic, professional diplomacy, of course, views the world struggle as a balance-of-power game. One's adversary is not a demon or even an enemy, only another player in a game with rules and limits. But religious crusaders do not play games, and for Wilson, democracy was a religion, as Communism was for Lenin. What ensued was not big-power rivalry but that most impassioned and cruel of all wars: a religious war of doctrines elevated to faiths.

These then were the origins of what came to be called, in the aftermath of World War II, the Cold War, a desperate struggle in the name of a new "world order" for the minds and souls, as well as the territories, of the entire world.

The first battle of the Cold War was fought in the heart of Europe over the wreckage of Germany. American and Russian forces had met and joyously embraced on the Elbe as Germany went down in unconditional surrender, but the embrace soon tightened into a grim deadlock because of the Allies' decisions at Potsdam in July, 1945. It was here that Germany was formally carved into four zones of occupation: the Russian, American, British, and French. America, as the most powerful of the Western nations, soon became the dominant force in the Western zones, the Soviet Union in the East. The lines dividing Europe into two parts were thus drawn at Postdam.

Roosevelt had died that spring and Truman represented America at Potsdam. Stalin represented the Soviet Union. Two men, in turn, represented Great Britain: first Churchill, and then the Labour leader, Clement Attlee, whose party won the national elections in mid-conference. France was not invited, for Truman mistrusted Charles de Gaulle—a hangover from de Gaulle's bad relations with Roosevelt. The snubbing of de Gaulle was only the first of the many errors made at the Potsdam Conference that would contribute to the division of Europe.

The greatest error, one that almost led to war, was the incredible agreement to set up a Four-Power Control Council in Berlin, which itself was within the Soviet Zone of Occupation. As a result, the narrow Allied corridor between Berlin and the Western zones was completely encircled by the Soviet army. Access to Berlin could easily be cut off, and it was, in fact, cut off within three years, precipitating one of the longest and most dangerous battles of the Cold War, the battle of the Berlin Airlift in 1948 and 1949.

The Potsdam Conference lasted from July 17 to August 2, 1945—just a few days before the end of World War II. The final bloody pages of the war were written on August 6 and 9, when mushroom clouds rose over Hiroshima and Nagasaki. And so, in the very last bitter and confused days of the "hot war," the Cold War began.

Some historians believe that the bombing of Japan was itself an act of both hot and cold war. They argue that Japan was already suing for surrender before the bombs were dropped. They dismiss as spurious the military estimate that it would have taken a million men and hundreds of thousands of casualties to invade the Japanese islands. Japan, they argue, was helpless and could have been easily starved into submission.

This view holds that the atom bomb was dropped for two nonmilitary, Cold War, reasons: first, to show the Soviet Union the awesome weapon of terror that America possessed, lest they be planning to expand across Europe and Asia in pursuit of the spoils of war; and second, to bring Japan down so swiftly that the United States could unilaterally occupy it and remake it as an American bastion in Asia. If America had waited to encircle the islands and starve Japan out, the Soviets would have taken a full part in the operation and claimed a share in the occupation, just as they had done in Central Europe.

Historical arguments can rarely be "proved," but in the Cold War it does not matter what can or cannot be proved; what governments *believe* to be true is what matters. And the Soviets believed that the bombing of Japan was directed, at least partly, against them.

Their mistrust of America was further sharpened right after the Japanese offered unconditional surrender on August 14, 1945: a week later, President Truman officially terminated the Lend-Lease Act. The Soviets, who had counted on continued, large-scale American aid for the reconstruction period, angrily denounced the cancellation as a hostile act. Unlike the United States, the Soviet Union had been devastated by Hitler's legions: ten million Russians had lost their lives; millions had died in combat with Hitler while Stalin pleaded with the Americans to open a second front in the West. The very least the Americans could do, the Russians complained, was to share the cost of reconstruction—and what they feared, from the atom bomb to cancellation of aid, was a new American conspiracy to cordon off Russia and keep her weak.

As Washington saw it, Moscow was the center of a global conspiracy to undermine war-weakened democracies and impose Soviet dictatorship on all the territories occupied by the Red Army. American politicians and State Department officials had never ceased denouncing Soviet aggression against Finland and their seizure and annexation of Latvia, Lithuania, and Estonia in 1939–40. Breaking the bonds of the old cordon sanitaire, the Red Army had spread across all of eastern Europe and by 1945 was entrenched deep in Central Europe, from the Adriatic to the Austrian Alps to the Baltic.

America's most respected diplomats—liberal, internationalist democrats like Averell Harriman, the wartime ambassador to Moscow—warned that Russia threatened to expand throughout Europe. Furthermore, they said Stalin was planning to expand southward to the rich oilfields of the Persian Gulf, and isolationists and longtime anti-Communists were quick to exploit their warnings. Congress, of course, was in no mood to vote large-scale aid to a Soviet Union that had been pictured as a powerful, dangerous enemy.

Before 1945 was out, the euphoria of victory in Europe and Asia had been eroded by the realization that an era of peace was not going to follow the end of the world's most terrible war. The former allies were quarreling over the occupation of Germany and new violence and subversion were erupting in vital, strategic arenas: in Iran, as Harriman had accurately predicted, and, even closer to American power interests, in the Mediterranean, from Turkey to Greece.

Iran was a key area for American strategists and analysts. Located on the Persian Gulf and bordering the Soviet Union, it had important oil reserves as well as a strategic geographic position. In the summer of 1941, two months after the German invasion of the Soviet

Hiroshima, August 6, 1945

The final bloody pages of World War II were written on August 6 and 9, 1945, when mushroom clouds rose over Hiroshima and Nagasaki, Japan. Thus, in the very last days of the 'hot war,' the Cold War began.

Union, Soviet and British forces had entered and occupied Iran to make it secure from a possible Nazi drive southeastward. American troops came in later to set up a supply system of war materiel for the Soviets.

At the Tehran Conference of 1943, the Soviet Union, Britain, and the United States had agreed to guarantee the postwar independence and territorial integrity of Iran. However, the Soviet Union, angered by the refusal of the Iranian government to grant oil concessions, fomented a revolt in the north, on the Soviet frontier, and subverted the Iranian state by creating puppet Soviet regimes, the People's Republic of Azerbaijan and the Kurdish People's Republic. Then, when the war ended, the Soviet troops, which were supposed to withdraw, remained in place. Iran protested at the United Nations, but after the deadline for withdrawal—March 2, 1946—the Soviet garrisons actually increased in strength.

Only days after the deadline, President Truman, who had been sending strong messages of protest to Moscow, accompanied Winston Churchill, then his guest at the White House, to Fulton, Missouri, knowing that Churchill was planning a bitter denunciation of the Soviet Union. Arguing that the Soviets would only respect force, Churchill called for a strong political and military union of Great Britain and the United States. That March 5 speech in Fulton has entered history as one of the first milestones of the Cold War, for it was in Fulton that Churchill first spoke publicly of the "iron curtain." The representatives of the world's press not only heard the speech but reported that the president of the United States had vigorously applauded it.

Washington immediately protested the Soviet violation of the Iranian evacuation agreement, and Truman sent another warning to Moscow. Secretary of State James F. Byrnes announced that "We will not and we cannot stand aloof if force or the threat of force is used contrary to the purposes and principles of the Charter." He then called for an immediate extension of the Selective Service Act and proposed the long-range adoption of universal military training.

The Soviets got the message. They rapidly began to backtrack at the United Nations, and Soviet diplomats hastened to reopen negotiations with Iran. They agreed to a schedule for troop withdrawal, and by the end of 1946 all Soviet troops had pulled back into the Soviet Union.

Iranian troops entered Tabriz on December 14, 1946, and drove out the remnants of the puppet regime whose local Communist leader, Pishevari, fled to the Soviet Union. The Iranian Government thus recovered control over all its territories. It had, however, in the negotiations, agreed to make oil concessions to the Soviets, but the Iranian parliament reneged on the agreement—further embittering the Soviets. More than ever they were convinced of the duplicity of the capitalist world, just as the Western world was convinced of the subversive, conspiratorial nature of the Soviet regime.

While the Cold War was being fought in southwest Asia throughout 1946, a civil war was raging in Greece. General Markos, a Communist guerrilla, led the rebel forces against the royal government, a protégé of Great Britain, and Communist guerrillas operating in the northern mountains controlled dozens of villages. British intelligence reports charged Yugoslavia, Albania, and Bulgaria, all Communist regimes, with aiding and abetting the rebellion. For Americans, not very sure where or what the Balkans were, the answer to the question of who was behind the Greek civil war was a simple one: it was Russia, of course, and Yugoslavia and the other Balkan Communist states were merely satellites manipulated by Moscow. Americans paid no attention to the fact that Tito was showing clear signs of independence. Even when Yugoslavia's break with Moscow became public and bitter, many Americans simply refused to believe it—just as men like Dean Rusk, a scholar and veteran foreign service officer, continued to believe, as late as 1966, that China was a political province of the Soviet Union, a junior partner in what Rusk always called the "Sino-Soviet State." These Americans simply refused to recognize the truth even when it was as massive as China. When Stalin, early in the Chinese struggle, supported Chiang Kai-shek against Mao, American observers would not admit it. From the start they subscribed to the myth of monolithic Communism.

In that early Cold War summer of 1946, with the Greek Government embattled and near economic collapse, the British began to consult with American officials, suggesting that urgent economic aid would be needed to keep Greece alive. Britain was having a most difficult time maintaining her imperial commitments, and Greece was becoming too heavy a burden to carry alone. Secretary Byrnes reached an agreement with the British foreign secretary, stating that, for military and strategic reasons, Greece and Turkey must not fall

U.S. AIR FORCE

American planes in Berlin, 1948

Churchill's bitter denunciation of the Soviet Union on March 5, 1946, in Fulton, Missouri, has entered history as one of the first milestones of the Cold War, for it was there that Churchill first spoke publicly of the 'iron curtain.' The press not only heard the speech but reported that the President of the United States had applauded it.

Truman and Churchill in Fulton, 1946

The narrow Allied corridor between Berlin and the Western zones was completely encircled by the Soviet army. Access to Berlin could easily be cut off, and it was, in fact, cut off in 1948, precipitating one of the longest and most dangerous battles of the Cold War, the Berlin Airlift.

into Soviet hands. But President Truman was not in a position to give substance to the Byrnes agreement. His prestige was low and in the Congressional elections of November, 1946, the Republicans swept to triumph in both houses, making Truman a minority president.

At that point in history many elements of the Cold War were already in place: Soviets and Americans were confronting each other in a wide arc from Iran and Turkey to Greece and Germany; Communists held powerful positions in the societies and governments of Italy and France; and, daily, there were venomous exchanges at the United Nations. The Cold War had indeed started, but it had not yet erupted in fury. The situation was not yet irretrievable. The deep freeze that was to settle on Europe, then on the world, splitting it apart for a quarter of a century, would not solidify until 1947—that was the year of the Cold War.

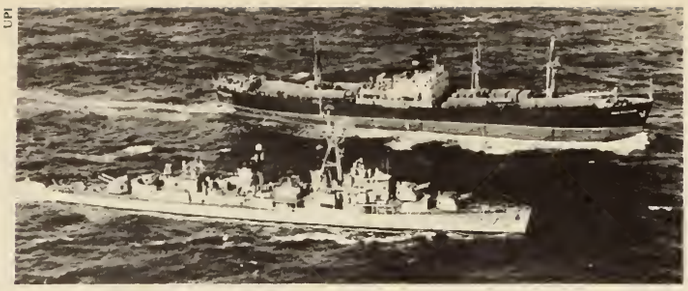
As 1947 dawned, political leaders hid their fears, succumbing to the clamor for a return to normalcy. President Truman, straining for popularity, had launched the new year optimistically. In a surprise proclamation delivered at noon on December 31, 1946, he announced the formal termination of hostilities in World War II. "Great gains have been made in translating military victory into permanent peace," he stated, and nullified a number of war and emergency statutes "in an effort to bring our economy and our Government back to a peacetime basis as quickly as possible." He must have known this was going to be a difficult, even impossible, task.

In the last days of 1946, the prime minister of Greece, Constantine Tsaldaris, had come to Washington with an urgent request for financial and military aid. Truman consulted officials of the Export-Import Bank, who explained that the law permitted loans only if repayment were assured. The foundering Greek Government could make no such assurances. All Truman could do was create an American economic mission to investigate the situation in Greece and report back to him.

Secretary Byrnes, aging and ailing, unable to cope with all the multiplying crises, offered his resignation to Truman. The president promptly chose as his new secretary of state the man he most admired, General George C. Marshall. Marshall was in China then attempting to reconcile the Communists and Nationalists. On leaving Nanking to return to Washington for his new post, Marshall denounced both Chiang Kai-shek's Kuomintang clique and the Communists of Mao Tse-tung. A plague on both your houses, he said in effect, and so ended his mission. One of the most portentous events of this century, as fraught with consequence as any event in history, would explode within three months: the Chinese civil war, with the eventual victory, at the end of 1949, of the Communists. Of all the tantalizing "ifs" of history, one cannot but wonder what would have happened if the United States had decided at that moment in January, 1947, to play a decisive role in China.

South of the Chinese border, in an ancient province of the French empire, Tonkin, not yet generally known by its new name, the Democratic Republic of Vietnam, another war was under way. The French had sent an expeditionary force into Haiphong and Hanoi to recapture the province, which had declared its independence in the wake of the Japanese surrender in 1945. Ho Chi Minh had rallied the underground forces that had fought on the Allied side against the Japanese and then struck back against the French. He had also sent messages to the Socialist premier of France, Léon Blum, proposing a truce and negotiations for independence and a new, friendly relationship between Vietnam and France. But Ho Chi Minh's message never reached Léon Blum. The French commanding general, who was in charge of all the communications networks in North Vietnam, simply threw it into his wastebasket. When Vietnamese delegates in Paris discovered what had happened, they called in reporters on February 6 and made the truce proposal on the spot, demanding recognition of Vietnam as a free nation. The French Government, overwhelmed by the colonialist faction in Paris, officially rejected the proposal and ordered its armed forces to put down the "rebellion." Thus the war in Vietnam erupted. Hardly anyone in the United States paid attention to what was happening in that distant land.

If there is a god of history, he must have been an angry sovereign in the year 1947, for hot and cold wars and terrorism erupted like scarlet fever all over the globe. In addition to civil war in Greece and China and colonial war in Indochina, rebellion against the British Empire was breaking out across the world and most particularly in the Middle East: on January 12, Jewish guerrillas blew up the Haifa police station. Jewish leaders announced that there would be no letup in the fighting until the British got out of Palestine and rec-



American and Soviet warships in Cuban waters, 1962

The world marched to the very brink of nuclear annihilation in the Soviet-American confrontation on the Cuban missile bases, the very worst moment of the Cold War.

ognized the free and independent nation of Israel.

On the sleepy Saturday morning of February 21 in "Foggy Bottom," headquarters of the State Department in Washington, the inevitable happened. The morning courier brought two notes from the British Government. They were brief but they did their part to change the history of the world. One concerned Greece; the other, Turkey.

The note concerning Greece pointed out that the Government was on the brink of collapse. It needed at least $280,000,000 in foreign exchange, plus economic and military aid—with the certain prospect of continued aid beyond that for some time to come. Great Britain, near collapse itself, would not supply further financial aid to Greece after March 31. The note concerning Turkey made the same points, even more starkly: Britain could no longer assure Turkey's survival.

The State Department officers who received the notes needed no background information to understand what they were reading. Yet, even they were stunned by the swift pace of events and the incredible deadline required for an American decision: the notes arrived on February 21; Washington had to meet a major foreign policy challenge by March 31.

The morning of February 22, Secretary Marshall, speaking at Princeton University, picked up the burden that Britain had laid down. He said that "if democratic processes in many countries are to resume their functioning, a strong lead and definite assistance from the United States will be necessary." Some three months later, prompted and counseled by Dean Acheson, Marshall elaborated upon that idea in a commencement address at Harvard, where he proposed what was to be one of the most remarkable, successful, and, in many ways, truly generous acts of the entire Cold War, the Marshall Plan for the modernization and reconstruction of Europe. But many crises had to be faced that spring before Marshall could propose this ultimate bridge between Europe and America.

First, the Greek crisis.

On March 7, Truman informed the Cabinet that America was confronted with the greatest peacetime challenge in its history. Officials of the departments of State, Defense, and Treasury, and of the principal agencies, were all briefed on the nature of the crisis and instructed to maintain close liaison with members of Congress. At one P.M. on March 12, President Truman walked into the House and delivered one of the shortest but most important speeches in American history. What he said that day has since been immortalized as the Truman Doctrine. It fundamentally changed the foreign policy and philosophy of the United States. The heart of the doctrine was contained in three terse paragraphs that were, in effect, a declaration of Cold War:

> I believe that it must be the policy of the United States to support free peoples who are resisting attempted subjugation by armed minorities or by outside pressures.
>
> I believe that we must assist free peoples to work out their own destinies in their own way.
>
> I believe that our help should be primarily through economic and financial aid, which is essential to economic stability and orderly political processes.

Truman left no doubt that there was more at stake than Greece and Turkey: "Should we fail to aid Greece and Turkey in this fateful hour, the effect will be far reaching to the West as well as to the East. We must take immediate and resolute action."

In this sweeping declaration the president had appointed America the policeman and savior of the entire world. The Monroe Doctrine had merely warned others to keep out of "our hemisphere"; the breathtaking arrogance of the Truman Doctrine was that it proclaimed our freedom to move into anybody else's hemisphere. Tragically, in an attempt to compete with the Soviets, we adopted the same methods that we hastened to condemn when Moscow used them. This was the nature of the Cold War, and it all hardened in that year of crisis, 1947.

Events moved rapidly after the Truman speech. The Council of Foreign Ministers meeting in Moscow broke up in April and it would be years before the foreign ministers of East and West could sit down for true negotiations. Russia tightened its grip over eastern Europe and, within a year, in the winter of 1948, would launch the Communist coup that would reduce a free Czechoslovakia to the status of a Soviet satellite and police state.

In the summer of 1947 representatives of France and Great Britain met in Paris with the Soviets to discuss Marshall's offer of aid to Europe. The Soviets, blinded by their own propaganda, made a fatal error. They rejected the Marshall Plan and walked out of the meeting. Had they accepted it, Congress probably would not have voted the funds.

On the day the conference broke up, I waited at the private elevator inside the Quai d'Orsay for the ministers to emerge. I saw the French foreign minister, Georges Bidault, a small, frail man, leaving with Britain's tough, ruddy foreign secretary, Ernest Bevin. When asked "What happened, gentlemen?" they replied simultaneously. Bidault:

"Europe has been split apart, all hope is lost." Bevin: "Europe has been saved. Now we can hope." Events would prove them both right.

The Soviets, convinced that America was financing a spearhead for an intervention against Russia, hastily called together the leaders of the Communist parties at a secret conclave in Poland. There they revived the prewar Communist International, giving it a new name, the Cominform. The Marshall Plan versus the Cominform, later to be expanded militarily into the NATO alliance versus the Warsaw Pact—these were the formal battlefields of the Cold War. The lines had been drawn, the legions had been enlisted, and the war was on.

In Europe, Asia, Africa, South America, on all continents and seas, the Cold War raged from the late forties through the sixties. In the process of trying to "stem the Red Tide," we came to support any regime of any kind, including the worst dictatorships, with the sole requisite that they be anti-Communist.

At home we came very close to destroying our own democracy. The Constitution and due process were shredded and torn during the McCarthy years, though even Senator McCarthy's methods seem pale compared with the police-state operations of the 1970's, as revealed in the Senate's investigation of the Watergate affair.

Measured in terms of personal agony, money, energy, time, and democratic processes, the Cold War took a toll as great as, possibly greater than, any hot war we ever fought. The Cold War was, perhaps, as costly to the Russian people. It diverted all the resources of men and monies from the task of reconstructing war-devastated Russia, delaying for decades any significant increase in Russian standards of living. Even today, with détente the slogan, the people live in a tyrannical dictatorship, their voices muted, their writers imprisoned and tortured. The Cold War certainly did not create Soviet dictatorship, but it just as certainly exacerbated it.

Is the Cold War over at long last, never to happen again?

Anyone with even passing knowledge of world affairs knows that peace and the brotherhood of man are not likely to break out in any foreseeable future. Espionage, sabotage, intelligence operations—all are, if anything, more widespread now than at the height of the Cold War, largely because of sophisticated technology. So long as these operations continue, so long as nations put their faith only in their own armed forces and economic strength, it is not possible to say that cold war will never happen again.

But when Richard Nixon walked through the gates of the Forbidden City in Peking, and through the doors of the Kremlin in Moscow, a new era of world history was ushered in—not yet peace, perhaps, but what we might call the post-Cold War period of history.

If we are beginning to see the world in its reality rather than in the mirror of our fantasies—and I think we are, in the West and in the East—then there is hope, if not for universal peace, for improving relations and for maintaining a safe distance from disaster. The world marched to the very brink of nuclear annihilation in the Soviet-American confrontation on the Cuban missile bases, the very worst moment of the Cold War. No one in high office wants to march back again.

Washington, Moscow, and Peking have not, suddenly, become imbued with brotherly love, nor have they abandoned their roles as crusaders and missionaries or their own conceptions of a world order. But they have learned, the hard way, in hot wars and cold, that in war there are no victors, there are only victims. As pragmatists, they have also learned that no one of them is strong enough to impose his will upon the others and that all three of them, mammoth as they are, could not, even combined, rule the world.

Thus, the world may not have become more moral, but it certainly has become more cautious, and perhaps wiser. There is, increasingly, the realization that the real enemies of America are not Russia or China. Our worst enemies are pollution, overcrowding, poverty, disease, and racism. Any sensible citizen wants a strong national defense, but not wasteful overkill. If we do not cut back the swollen Pentagon budget, the day will come when our cities will be surrounded by shining missiles, while inside the missile ring we will be choking to death on our own wastes. More and more Americans, Chinese, and Russians are beginning to understand that the building of a better life is the challenge of the next century, not the building of a new world order in their own image.

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Détente in Peking, 1972

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Books to Avoid Reading

The avalanche of books that threatens to engulf us all continues to grow apace. In a recent copy of *Publishers Weekly* I received the disquieting news that some 473 new titles were actually published in one week alone. They ranged from John Alden's *The American Steel Navy*, a photographic history of the U.S. Navy between the introduction of the steel hull in 1833 and the cruise of the Great White Fleet in 1907, to Ahmed Yacoubi's *The Alchemist's Cookbook*. And as sure as trees are being felled in the Pacific Northwest to create more books, next week will bring word of yet another 473 literary efforts.

In the face of this onslaught the reader is almost, but not entirely, defenseless. However, traditional methods such as skimming or speed reading are of little value in today's fast-moving society. Even a moment spent reading a book you don't want to is a moment lost forever. No. Bad books must be fought at the water's edge: at the very bookstore shelf itself. The reader must learn to master the art of Instant Rejection: the ability to look at nothing more than the dust jacket and pick out those little signs that tell him he doesn't want to read another word. I discovered the value of Instant Rejection quite by accident seven years ago at Brentano's, when I decided not to buy a book simply because the cover announced that it was "destined to become a classic of our time." Since then, I have not read one single classic of our time and I cannot tell you how much better I feel for it.

As I developed my skills I found that almost any part of the jacket can be used to form the basis of an I.R. For example, books with a colon in the title (as in *Bulgaria at the Crossroads: The Illusion and the Dilemma*) can always be safely skipped. Artwork should be checked, and the book immediately dropped at the first sign of an oil painting of a Southern mansion—especially if there is a lady in a ball gown standing in front. Even plugs from other writers can be grist for the mill. I have always tried to steer a middle course between the recommendations of both Earl and Edmund Wilson and have spared myself God knows how much heartache.

I have developed my system until it is now ready for publication as a public service. Keep one copy with you at all times and post another inside the medicine cabinet where the whole family can readily refer to it.

DO NOT READ:

Any book entitled *Notes On . . .*

Any book by someone who has personally known Henry Kissinger, Judy Garland, the Kennedys, or Hugh Hefner.

Any book that promises to raise your consciousness or lower your weight.

Any book that "reads like a veritable 'Who's Who' of show business."

Any book by an author who has inherited the mantle of either Damon Runyon or Macaulay.

Any book of serious poetry by a Latin American author who has won the National Book Award in the past five years. (In the case of Nobel Prize winners, it is best to wait at least seven years.)

Any book by Norman Mailer that purports to be about women.

Any book illustrated by tarot cards or signs of the zodiac.

Any book by an ex-nun or an ex-prostitute. This is especially true if one has become the other.

Any compilation of the wit and wisdom of anyone.

Any book by an author over thirty who has his picture taken wearing jeans.

Any book on philosophy by a manual laborer or any book on manual labor by a philosopher.

Any university press book costing more than $8.50.

Any book on the funny things kids do.

Any book that is soon to become a major motion picture by Otto Preminger.

Any book set in a tumultuous period of America's history. Indeed, any book that is described as being tumultuous anywhere.

Any book that quotes a line from either Robert Frost or James Joyce in the title.

Any book of fairy tales for adults.

Any searing novel that finally brings homosexuality out of the closet.

Any book that promises to fill every moment of every day of your life.

Any book of "belles lettres" by an author who has not been dead for at least seventy-five years.

Any novel set in a kibbutz.

Any novel set in a plane, bus, train, ship, or any other conveyance where people from all walks of life meet and share one climactic moment.

Any novel that spans the life of three generations of a mighty family whose compelling story is told amid the holocaust of world war.

Although the list is long, be sure to keep plenty of blank paper handy because new categories are being added every day. And don't worry about what you might be missing. There are still plenty of great books around. For example, there is a compilation of jottings of mine to be published soon. Entitled *Badgers in the Bathtub*, it is the haunting story of a young boy coming of age during the construction of the Chicago World's Fair in 1893. Spun from the sheerest gossamer, its comic mask hides the serious social commentator underneath. Don't miss it. It makes *The Happy Hooker* read like *Little Women*.

By PETER ANDREWS